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WENTWORTH'S ARITHMETICAL PROBLEMS.

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Alice C. Boynton

ttle by little, sure & slow
e fashion our future of bliss or woe
As the present passes away
Our feet are climbing the stairway bright
Up to the regions of endless light
Our gliding downward into the night

I wish for you, till life shall cease
The blessings of health & love & peace
And while these blessings their
pleasures lend
Remember me as an honest friend

Learning we know is more precious
than gold
But the worth of hearts jewels can
never be told
Strive then for virtue truth, honor
and love
And thus lay up treasures in
mansions above,

Oh let me ask & fondly hope
That I thy friend may be
That in the garden of thy heart
One flower may blow for me
May thy path be bright with

Be thou a hero.! let thy might
Trample on eternal shows its way
And, through the ebon walls of night
Hew down a passage unto day

Press bravely on! and reach the goal
And gain the prize & wear the crown
Faint not! for to the steadfast soul
Come wealth, & honor, & renown.

Speek gently; tis a little thing
Dropped in the hearts deep well
The good, the joy which it may bring
Eternity shall tell

Speek gently to the erring —
They must have toiled in vain
Perchance unkindness made
so
I, win them back again,

Three things bear mighty sway
with men
The sword the cepter & the pen

I will not forget you

If you wish to laugh
not forget you look at
my autograph

May you walk the path of duty
Whether strewn with thorns or
flowers
Till you reach the land of beau
Where no storm of sorrow lowers.

Never to the bow that bends
comes the arrows that it sends
Never comes the chance that's pas
That one moment was to late

ARITHMETICAL PROBLEMS,

ARRANGED FOR

DRILL AND REVIEW

IN

PRIMARY, GRAMMAR, AND HIGH SCHOOLS.

By E. WENTWORTH,
PRINCIPAL OF NORTH SCHOOL, PORTLAND, ME.

JOHN S. PRELL
Civil & Mechanical Engineer.
SAN FRANCISCO, CAL.

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PREFACE.

HAVING felt the necessity of a larger number of progressive examples for practice than is usually found in the text-books, in order to secure accuracy and rapidity in arithmetical operations, I prepared, some time since, and used in my own school, most of the examples included in the first three chapters of this book; and by request of many experienced teachers, additions have been made to those examples, and the work is now offered to the public; not, however, as a rival to any other text-book, but as one designed to be used with, and supplementary to, any text-book in use.

Experience shows that much time is lost by inaccuracy in computation, and that many pupils who can perform, satisfactorily, examples arranged under certain rules, fail to perform original and miscellaneous examples, given by the teacher, even though more simple and involving the same processes; because before one principle with its applications is understood, another is thrust upon them.

I have endeavored to obviate these difficulties by arranging the work in such order as to test the ability of the pupils upon any given topic, and to furnish a thorough drill. Therefore the distinguishing feature of this work is, that each subject is first treated separately, with at least twenty-five examples, without answers, rules, tables, or suggestions; including every form of rules pertaining to the subject, so that in a class of from twenty-five to thirty, each pupil can have a different example; then a large number and variety of Promiscuous

Examples are given, involving all the preceding rules, and so arranged as to require a practical knowledge of them. The book is divided into four chapters.

The First Chapter is confined to operations in the Fundamental Rules, United States Money, and Compound Numbers; and is designed for Primary and the lower grades of Grammar Schools.

The Second Chapter includes Common and Decimal Fractions; and the Third, Percentage, with its applications, Partnership, Proportion, Square and Cube Roots; and is designed for Grammar Schools.

The Fourth Chapter embraces the whole subject of Arithmetic, and is designed for High School work. This Chapter was prepared by Mr. A. P. STONE, Principal of the Portland High School, to whom I am under special obligations for valuable suggestions, as well as the preparation of this Chapter.

E. WENTWORTH.

PORTLAND, *April, 1872.*

CHAPTER I.

DRILL AND REVIEW EXERCISES IN THE ELEMENTARY RULES OF ARITHMETIC, UNITED STATES CURRENCY AND COMPOUND NUMBERS.

Write the following numbers:

1. Forty million, fifteen thousand, seven hundred.
2. Six hundred three million, four thousand, seventy-five.
3. Twelve billion, thirty million, one thousand, two hundred.
4. Five hundred thousand, eight hundred forty-seven.
5. One hundred million, seven thousand, four hundred.
6. Seven hundred fifty billion, sixty thousand, thirty-four.
7. Three million, four hundred nine thousand, twelve.
8. Two hundred billion, thirteen million, seven thousand.
9. Four hundred five million, three hundred fifty thousand.
10. One hundred sixty thousand, five hundred nineteen.
11. Seven hundred ten million, seven thousand, ten.
12. Eighteen billion, fifty thousand, four hundred one.
13. Two hundred million, ten thousand, nine hundred.
14. Ten billion, forty million, three hundred twelve.
15. One hundred one million, ten thousand, one hundred.
16. Ninety million, five hundred thousand, twenty-three.
17. Ten million, twenty-seven thousand, nine hundred ten.
18. Twelve million, one thousand, eight hundred forty.
19. One hundred sixty million, one hundred thousand.
20. Forty-seven thousand, two hundred eleven.
21. Eleven billion, four million, four hundred thousand.
22. Three hundred fifty million, eleven thousand, forty.
23. Twenty-six billion, seventy-five thousand, one hundred.
24. Four hundred million, ten thousand, five hundred thirty.
25. Seventeen billion, eight million, three hundred five.
26. Five billion, ninety thousand, one hundred eleven.

27.	*28.*	*29.*	*30.*	*31.*
5240172	470249	39862	9142634	538142
367048	9080560	463059	573127	21960
54170	25453	72403	2401840	8243576
7023942	207135	6512920	75064	734205
629405	3401067	4147	3120300	4095478
40372	4721	8094625	625810	1621150

32.	*33.*	*34.*	*35.*	*36.*
28054	1207642	9067890	5756427	4763256
12345	56574	7543267	244604	987635
579635	7966	612343	1135072	903
97054	4346025	5075172	623429	5635140
761456	152409	412746	9421560	263104
16044	647531	2104355	4036357	7256422

37.	*38.*	*39.*	*40.*	*41.*
532769	7689106	545684	4962347	372421
4305175	227531	2307528	230524	59055
8143324	980406	260135	3075125	4920
3607	3409082	9072410	406862	42364
57843	65743	307086	7210490	541647
5420653	6445077	4240734	642067	8205402

42.	*43.*	*44.*	*45.*	*46.*
365463	5234709	981742	863247	199380
4641901	52470	2470545	3277801	7434275
356264	6090514	9402074	9028056	821068
7410457	720086	59317	139208	5932407
99108	8405365	870648	2475416	852064
9102596	74207	5243466	958745	433226

47.	*48.*	*49.*	*50.*	*51.*
6375732	2464725	785634	2069743	150492
509428	3982414	7856340	9507651	7401680
1927109	573528	125401	650264	43172
9056290	491736	954178	7510395	573273
473506	4182647	4035274	422581	9190285
85145	8053825	5603480	634076	475047

52.	*53.*	*5*
8147265215	705421946	40057100425
2538627431	5186049	5184241162

55.	*56.*	*57.*
5204140053	231462324	10435127315
295224327	194040575	6380743646

58.	*59.*	*60.*
9360402180	521460132	15000314031
6875028407	250382409	2138405118

61.	*62.*	*63.*
2244270120	850075426	95100365400
807422053	509480098	9247087502

64.	*65.*	*66.*
4000000000	342164312	87043143235
2105250047	87328170	194528369

67.	*68.*	*69.*
6112431263	415316400	75120351312
5370643198	327807749	65487274504

70.	*71.*	*72.*
7501324132	621123231	33530245110
924165324	130591655	23915637528

73.	*74.*	*75.*
5210425231	710942162	64500002190
3842178324	92687085	927436244

76.	*77.*	*78.*
1002010101	127310213	99234040512
409607512	78506405	5471362476

79.	*80.*	*81.*
3123400123	500500500	11215131200
634569342	37537137	4427365485

82. Add five hundred five thousand, five hundred five; twenty-four thousand forty; thirty thousand three hundred; thirty-one thousand fifty.

83. Subtract seven million, fifty-seven thousand, nine hundred twenty-nine, from three hundred forty-six million, one hundred one thousand.

84. Add eighty-seven thousand, two hundred one; two hundred fifty thousand eight hundred; eight hundred thousand eighty-seven; four hundred forty-nine.

85. From forty-seven million, three hundred one thousand thirty, take four hundred eighty-three thousand, three hundred thirteen.

86. Add fifty million fifty; ten thousand ten; one million, twenty thousand eight hundred; thirty thousand six hundred.

87. From ninety million, thirty thousand thirty, take seven million, six hundred forty thousand, five hundred seventy-eight.

88. What is the sum of five billion, twenty million, one thousand eight; one hundred fifty million sixty thousand; three hundred four million, ten thousand, two hundred fifty-eight?

89. From one hundred five billion take twelve million, sixty-four thousand twenty-five.

90. Find the amount of seven hundred million, two hundred sixteen thousand two hundred; forty million, nine hundred seventy-five; eight thousand fourteen.

91. Subtract eight hundred seventy thousand, three hundred fifty, from twenty-seven million, nine thousand eighteen.

92. Add ten million, thirty thousand, six hundred eight; ninety thousand, five hundred seventeen; four million three hundred sixty-five thousand; one million seven hundred sixty.

93. From one hundred twenty-seven million, five thousand five, take ninety million, twelve thousand eighty-seven.

94. What is the sum of two million four hundred twelve thousand; twenty-four million, five thousand twenty; six hundred thousand forty-four; forty million, three hundred seventy-five?

95. From eight hundred thousand take ninety thousand, nine hundred sixty-nine.

96. Add seven hundred thousand, two hundred sixty; twelve million twelve; fifty thousand four hundred; six million, two thousand twenty seven.

97. From three million, sixty-five thousand three, take six hundred thirty-eight thousand, four hundred nineteen.

98. Add twenty thousand, five hundred eleven; four million, seven hundred thousand thirty; two thousand ninety; four hundred thousand, seven hundred four.

99. Subtract seventy-five million, eighty-eight thousand, seven hundred fifty-four, from five hundred million.

100. Add nineteen billion sixteen; thirty million, six hundred forty-seven thousand sixty-three; eight million, twenty thousand, two hundred forty-nine.

101. From four hundred twenty billion, five thousand seven, take three hundred forty billion, thirty thousand four.

102. Add eighty-four million fifteen; sixty-seven thousand sixty-eight; five million, ten thousand seventeen; three hundred thousand twenty; three million, eight thousand seventy-five.

103. From one million, six thousand nine, take seventy thousand, five hundred eight.

104. What is the sum of two million, seven thousand eighteen; three hundred five thousand nineteen; nineteen million, five hundred thousand; two million, four hundred twenty?

105. Subtract four hundred twenty-five million, thirty-seven thousand, nine hundred fifty-three from one billion.

106. Find the sum of twelve billion, thirteen million, forty thousand; twenty million, three hundred thousand, six hundred; one hundred thirty thousand thirty; seven thousand, two hundred five.

107. Subtract nine hundred thousand, four hundred fifty-seven from ten million, one hundred five thousand, two hundred eleven.

108. Multiply 5469326 by 4; by 35; by 627.
109. Multiply 4625075 by 7; by 46; by 432.
110. Multiply 3250467 by 3; by 24; by 576.
111. Multiply 9873672 by 5; by 62; by 348.
112. Multiply 6708423 by 2; by 53; by 467.
113. Multiply 7530647 by 8; by 46; by 357.
114. Multiply 5069384 by 4; by 72; by 563.
115. Multiply 6304867 by 6; by 49; by 826.
116. Multiply 5940685 by 7; by 38; by 605.
117. Multiply 3094723 by 5; by 45; by 921.
118. Multiply 8549308 by 9; by 82; by 476.
119. Multiply 409857 by 3; by 48; by 295.
120. Multiply 690574 by 6; by 37: by 548.
121. Multiply 5704685 by 8; by 52; by 290.
122. Multiply 968037 by 4; by 28; by 407.
123. Multiply 6290874 by 7; by 48; by 825.
124. Multiply 375486 by 6; by 74; by 647.
125. Multiply 3286754 by 3; by 57; by 365.
126. Multiply 7209948 by 5; by 38; by 643.
127. Multiply 2587049 by 7; by 29; by 286.
128. Multiply 864754 by 4; by 54; by 519.
129. Multiply 247825 by 6; by 54; by 273.
130. Multiply 508637 by 2; by 76; by 543.
131. Multiply 7542964 by 9; by 47; by 625.
132. Multiply 8057492 by 4; by 68; by 357.
133. Multiply 5460748 by 7; by 38; by 402.
134. Multiply 9208476 by 2; by 73; by 456.
135. Multiply 5703928 by 8; by 92; by 167.
136. Multiply 7435039 by 5; by 75; by 462.
137. Multiply 4827046 by 7; by 42; by 305.
138. Multiply 3590867 by 4; by 64; by 537.
139. Multiply 4068137 by 6; by 72; by 435.
140. Multiply 3562853 by 5; by 45; by 382.
141. Multiply 4209473 by 7; by 83; by 250.
142. Multiply 9574087 by 4; by 92; by 538.
143. Multiply 8362409 by 3; by 57; by 426.
144. Multiply 7290438 by 5; by 36; by 407.
145. Multiply 3782905 by 6; by 74; by 358.

146. Divide 4705342 by 2; by 63; by 455.
147. Divide 5063728 by 5; by 72; by 346.
148. Divide 2531049 by 7; by 81; by 532.
149. Divide 6108590 by 4; by 92; by 138.
150. Divide 1372427 by 3; by 56; by 472.
151. Divide 9420305 by 6; by 47; by 352.
152. Divide 6027148 by 9; by 38; by 274.
153. Divide 7425915 by 8; by 45; by 732.
154. Divide 3704520 by 5; by 64; by 273.
155. Divide 4132576 by 2; by 37; by 465.
156. Divide 29504314 by 4: by 53; by 621.
157. Divide 34567891 by 6; by 65; by 149.
158. Divide 2573468 by 8; by 73; by 426.
159. Divide 2791548 by 7; by 85; by 243.
160. Divide 7294682 by 5; by 42; by 673.
161. Divide 7805345 by 9; by 36; by 547.
162. Divide 3720423 by 3; by 74; by 629.
163. Divide 5378042 by 6; by 57; by 348.
164. Divide 4708197 by 4; by 63; by 529.
165. Divide 5043706 by 2; by 94; by 357.
166. Divide 6570523 by 6; by 75; by 418.
167. Divide 4976854 by 9; by 26: by 350.
168. Divide 5092756 by 3; by 57; by 146.
169. Divide 7806972 by 6; by 43; by 572.
170. Divide 2483057 by 8; by 27; by 345.
171. Divide 2950726 by 5; by 48; by 162.
172. Divide 7043295 by 2; by 93; by 435.
173. Divide 9806257 by 4; by 53; by 171.
174. Divide 2354075 by 7; by 19; by 439.
175. Divide 5043746 by 5; by 64; by 723.
176. Divide 8542308 by 9; by 17; by 456.
177. Divide 4912734 by 4; by 57; by 167.
178. Divide 6304567 by 8; by 42; by 536.
179. Divide 1246859 by 2; by 84; by 719.
180. Divide 8642357 by 7; by 36; by 453.
181. Divide 90470653 by 4; by 18; by 160.
182. Divide 52740846 by 6; by 45; by 914.
183. Divide 38504275 by 3; by 72; by 465.

184. If the multiplicand is 9476 and the multiplier 367, what is the product?

185. If 76 hogsheads of molasses cost 2888 dollars, what is the price of 1 hogshead?

186. Sold 29 bales of cloth, each containing 35 yards, at 75 cents per yard; how much did I receive?

187. What cost 749 gallons of vinegar at 28 cents per gallon?

188. Divide one hundred eighty-four thousand, seven hundred seventy-five dollars among 389 men?

189. If one acre of land costs 45 dollars, what will 4721 acres cost?

190. Multiply forty-nine thousand seventy-eight by four hundred eight?

191. Bought 75 bushels of corn at 92 cents per bushel, and 87 bushels of oats at 65 cents per bushel; what was the amount of the corn and oats?

192. If 237 bags of coffee cost 20145 dollars, what cost one bag?

193. What is the difference between one million, and nine thousand seventy-four?

194. What cost 125 horses at 250 dollars apiece, and 235 cows at 65 dollars apiece?

195. What is the weight of 755 barrels of flour, each weighing 196 pounds?

196. A man owing 9475 dollars gives in payment 45 acres of land valued at 37 dollars per acre and $5000 in cash; how much remains unpaid?

197. How many bales will 1072512 pounds of cotton make, allowing 294 pounds to the bale?

198. A farmer sold 1125 bushels of wheat for 96 cents a bushel, 942 bushels of oats for 43 cents a bushel, and 625 bushels of corn for 75 cents a bushel. How much did he receive?

199. A trader bought 975 bushels of wheat for 95 cents a bushel and sold it for 99 cents a bushel; how much did he gain?

200. How many times is 216 contained in 1554768?

201. Bought 85 barrels of apples at 4 dollars a barrel, 36 barrels of potatoes at 2 dollars a barrel, and 25 tons of hay at 27 dollars per ton, and sold the same for 1500 dollars; how much was gained?

202. At 25 dollars per acre, how much will 840 acres of land cost?

203. If a man travel 34 miles a day, how long will it take him to travel 2210 miles?

204. If a field of 640 acres produces 14720 bushels of wheat, how much will 1 acre produce?

205. A merchant bought 25 hogsheads of molasses at 40 dollars each, and paid 750 dollars down; how much remained unpaid?

206. A merchant sold 26 pieces of cloth, each piece containing 42 yards; how many yards were there?

207. In how many days will a ship sail 5075 miles, if it sails 140 miles each day?

208. What must be paid for 742 bushels of wheat at 2 dollars per bushel, 86 barrels of flour at 9 dollars per barrel, and 229 barrels of pork at 19 dollars per barrel?

209. Sold 892 tons of hay at 28 dollars per ton; how much did I receive?

210. A speculator bought land for 218568 dollars at 42 dollars per acre; how many acres did he purchase?

211. Bought 95 hogsheads of molasses at 56 dollars per hogshead, and sold it at 75 dollars per hogshead; what was gained?

212. Sold 148 cords of wood at 8 dollars per cord, 57 tons of timber at 24 dollars per ton, and 45 cords of bark at 12 dollars per cord; what was the amount received?

213. At 29 dollars per barrel, how many barrels of sugar can be bought for 30305 dollars?

214. If a person travel 45 miles a day, how far will he travel in 96 days?

215. If 1578 barrels of beef are sold for 23670 dollars, what is the price of one barrel?

216. Add 27×39 and 1969×4.
217. 298×10 minus $25 \times 37 =$ what?
218. Multiply $242 - 127$ by $140 + 133 + 27$.
219. $2103 + 1614$ multiplied by $83 - 75 =$ what?
220. Add 114×40 and 370×63.
221. 2044×32 divided by $55 - 41 =$ what?
222. Subtract $4248 \div 8$ from 787×5.
223. 155×400 plus $1350 + 2530 + 2820 =$ what?
224. Multiply $572 + 267 + 128$ by $112 - 62$.
225. Add 86×64 and 1081×32.
226. 422×16 minus $313 \times 4 =$ what?
227. Divide 252×50 by $27 \div 9$.
228. Add 162×126 and 8×5377.
229. $951 - 627$ multiplied by $1000 \div 40 =$ what?
230. Subtract $961 + 782 + 116$ from 4087.
231. 817×12 plus $5193 \div 3 =$ what?
232. Divide 147×40 by $600 - 110$.
233. What is the difference between 175×10 and $8750 \div 10$?
234. Add $4400 + 1281 + 3790$ and $471 \div 157$.
235. Multiply $30060 + 28765$ by $12 - 4$.
236. What is the difference between 1182×7 and 1463×4?
237. $31920 \div 2660$ multiplied by $173 \times 8 =$ what?
238. 163×23 plus $441 \times 20 =$ what?
239. $660 \div 3$ minus $2106 \div 162 =$ what?
240. Divide 4311×32 by $3 + 8 + 1$.
241. $330 - 214$ multiplied by $528 - 128 =$ what?
242. $829 + 516 + 724$ minus $480 + 560 + 380 =$ what?
243. Add $1666 - 1254$ and $7650 \div 9$.
244. What is the difference between 8303 and $1284 - 1171$?
245. Divide $68040 \div 7$ by $45 \div 3$.
246. $218 - 182$ multiplied by $110 - 94 =$ what?
247. $28015 + 22205$ divided by $25 + 42 + 14 =$ what?
248. $1500 - 482$ plus $436 + 225 =$ what?
249. Add $82 + 118$ and $418 - 118$.
250. Multiply 100×10 by $500 \div 100$.
251. What is the difference between 800×5 and $12500 \div 5$?
252. 4433×4 divided by $10 + 11 + 10 =$ what?
253. Subtract $5979 - 167$ from $7830 + 167$.

Write the following numbers:

254. Five hundred dollars, five cents, four mills.
255. Four hundred eagles, eight dollars, three dimes, two cts.
256. Three hundred ten dollars, one cent, two mills.
257. Two million thirty thousand dollars, thirty-seven cents.
258. Fifty million dollars, twelve and one-half cents.
259. Seventy-five thousand fifteen dollars, seven mills.
260. Five and one-half eagles, five and one-half dimes.
261. Seven hundred twenty-five dollars, two cents nine mills.
262. Six hundred two dollars, six dimes, eight cts., three mills.
263. Eight hundred sixty dollars, eighteen cents, four mills.
264. Fifty dollars, five cents, nine mills.
265. Twenty thousand dollars, seventeen cents, five mills.
266. Three eagles, nine dollars, fifty cents.
267. One hundred eagles, seventy-five cents, eight mills.
268. Fifty thousand dollars, thirty-seven cents.
269. Nine hundred one dollars, ninety cents.
270. One thousand ten dollars, one cent, one mill.
271. One hundred dollars, ten cents, one mill.
272. One hundred thousand ten dollars, nine cents.
273. Seventy-five dollars, ten cents, two mills.
274. One hundred twenty dollars, two cents, five mills.
275. Five thousand forty dollars, fifteen cents.
276. Seven hundred ten dollars, four cents, six mills.
277. Twenty thousand dollars, seventy-five cents.
278. Thirty-five thousand one dollars, twelve cents.
279. One thousand fifty dollars, fifty cents.
280. Ten dollars, one cent, one mill.
281. Ninety-nine dollars, nine dimes, three cents.
282. One hundred dollars, ten cents, nine mills.
283. Forty eagles, seven dollars, two dimes, eight mills.
284. Twenty thousand twenty dollars, five cents.
285. Four thousand nine dollars, seven cents.
286. One hundred thousand six dollars, thirty cents.
287. One dollar, one cent, one mill.
288. One thousand dollars, ten cents, nine mills.
289. Four hundred thousand dollars, eleven cents.
290. Fifty thousand fifty dollars, fifty cents.

291. Reduce 7564 cents to dollars.
292. How many cents in $59806?
293. Change 569482 mills to dollars.
294. How many mills in $43.12?
295. Reduce 427 mills to cents.
296. How many cents in 500 eagles?
297. Change 55 dollars, six cents, five mills to mills.
298. Reduce 75 dollars to cents.
299. How many dollars in 57346 cents?
300. Reduce 450 mills to cents.
301. How many eagles in fifty thousand mills?
302. Reduce eighty thousand cents to double eagles.
303. Change fifty-two dollars to cents.
304. How many cents in five hundred dollars ten cents?
305. Reduce twenty-five thousand cents to dollars.
306. How many half eagles in 45000 cents?
307. Reduce 16525 mills to dollars.
308. In 7593 cents how many dollars?
309. In 4369 mills how many dollars?
310. Reduce 55050 mills to dollars.
311. In 12020 cents how many dollars?
312. Reduce 59436 mills to cents.
313. In one thousand dollars, ten cents, nine mills, how many mills?
314. Reduce 909 mills to cents.
How do you reduce dollars to mills? Why?
315. How many dimes in 5 eagles?
316. How many mills in 9 dimes?
317. Reduce 5 eagles, 5 dollars, 5 dimes to cents.
318. How many cents in 50 eagles, 50 dollars, 50 dimes?
319. In 14750 cents, how many dollars?
How do you reduce dollars to cents? Why?
320. In 11203 cents, how many dollars?
321. Reduce $15.25 to cents.
322. How many cents in $100.01?
323. In five dollars, two cents, how many mills?
324. In 5463 cents, how many dollars?
325. How many dollars in 15300 cents?

326. Add fifteen cents; seven hundred fifty dollars; two dollars, six mills; nine mills; twenty-five dollars, three cents, and one mill.

327. Bought a barrel of flour for $9.50, a ton of coal for $11.25, a barrel of sugar for $29.75, and a box of raisins for $3.75½; what was paid for the articles?

328. A man bought a horse for $180, and sold him for $220.50; how much did he make by the bargain?

329. What will 4962 bushels of wheat cost at one dollar and five cents a bushel?

330. Paid $848.02 for 389 barrels of apples; what was the price per barrel?

331. At $9.50 per barrel, how many barrels of flour can be bought for $2498.50?

332. A man bought cows at $47.50 per head; how many could he buy for $3182.50?

333. Add seventy-three dollars, eleven cents; sixty-six dollars, six dimes; five eagles, five cents; one hundred nine dollars, nine cents; and six hundred dollars, ten cents, five mills.

334. If 200 pounds of pork cost $22, what is the price per pound?

335. How many cords of wood, at $8.25 per cord, must be given for 900 pairs of shoes at $1.10 a pair?

336. If a farm of 84 acres costs $1233.96, what is the price of one acre?

337. Multiply one hundred fifteen dollars, five cents, seven mills by four hundred eight.

338. From $500 take 30 eagles, six dimes and six mills.

339. If ten tons of coal can be bought for $42.50, what is the price of 100 tons at the same rate?

340. What is the price of 5 bales of cotton, each weighing 312 pounds, at $0.315 per pound?

341. How many half eagles in $4375?

342. A man paid $267 for a carriage, and 157 dollars 12½ cents for a horse; how much more did he pay for the carriage than for the horse?

343. Paid 175 dollars and eight cents for a carriage, $200 for a horse, $145.75 for a yoke of oxen, and $12.15 for a plow; how much was paid for all?

344. At $3.12 a day, how much will a man earn in 287 days?

345. What cost 24 firkins of butter, each containing 47 pounds, at 38 cents 6 mills per pound?

346. A drover bought 743 cattle for $92875; what is the average price of each?

347. If 27 bags of coffee, each weighing 48 pounds, cost $54432, what is the price per pound?

348. Reduce 47968 mills to dollars.

349. If 75 reams of paper cost $243.75, what cost 157 reams?

350. A lady paid $45.25 for a dress, $15.62½ for a bonnet, $22.75 for a shawl, and gave in payment $100; how much ought she to receive?

351. If 95 barrels of sugar cost $1095.35, what is the price of a barrel?

352. Bought a horse for $150, a wagon for $90.50, a harness for twenty-three dollars six cents, and a buffalo robe for $18¾; what is the cost of all?

353. What cost 875 sheep at $5.12½ per head?

354. Paid $268.40 for 610 boxes of strawberries; what was the price per box?

355. Sold 75 bushels of potatoes at 56 cents per bushel, 150 pounds of pork at 16 cents a pound, 40 bushels of beans at $2.25 per bushel; how much was received for all?

How do you reduce dollars to cents? to mills? mills to dollars?

356. Add $250.503; 7 eagles, 4 dimes, 6 mills; 12 dollars, 15 cents; 40 eagles, 20 cents; and $400, 5 mills.

357. If one bushel of beans costs $2.37½, what will 45 bushels cost at the same rate?

358. How many quarter eagles in $1857.50?

359. From one thousand dollars there were paid to one man $57 eight cents, to another $175 three cents, to another six hundred dollars; how much remained?

360. If 476 sheep cost $3213, what is the price of one sheep?

361. If I purchase a horse for $125.37, how much must I pay for 527 horses at the same rate?

362. At $2.75 a day, how much will a man earn in 313 days?

363. Add $5.125 + $40.75 + $13 and five mills + one dollar, ten cents.

364. If 395 acres of land cost $1860.45, what will 5 acres cost?

365. A lady went shopping with $10 in her purse; she paid 27 cents for needles, $1.25 for gloves, and three dollars for calico; how much had she left?

366. A family paid for flour $23.15, sugar $5.62½, butter $15.12½, and beef $20.25; what is the amount?

367. A farmer bought a yoke of oxen for $215 nine cents, a cow for $67.30, sheep for $85 four cents, and a horse for $198 five cents; how much did the whole cost?

368. What will 8728 sheep cost at $3.76 apiece?

369. Reduce $20.275 to mills.

370. If 254 cords of wood cost $2407.92, what is the price of a cord?

371. A lady bought a dress for $37.15, a bonnet for $12 six cents, a shawl for thirty dollars ten cents, and a pair of boots for $3.62; what did they all cost?

372. Bought a horse for $300 and sold him for $275 twelve cents; how much did I lose?

373. If 725 acres of land cost $18306.25, what was the cost of one acre?

374. From one hundred dollars take nineteen dollars and seven cents.

375. What cost 527 bushels of wheat at $1.12½ a bushel?

376. When flour is $10.50 a barrel, how many barrels can be bought for $4462.50?

377. At $12 and five mills an acre, what will 225 acres of land cost?

378. What cost 6 doz. Arithmetics at ninety-five cts. apiece?

379. If 25 Readers cost $22.17½, what is the price of each?

380. What cost 13 barrels of sugar, containing 224 pounds each, at 12½ cents a pound?

381. How many cords of bark at $5½ a cord, will pay for fifty barrels of sugar at $44 a barrel?

382. If 220 bushels of corn cost $176, what is the price per bushel?

383. How many bushels of wheat, at $1.12½ per bushel, will pay for 900 bushels of corn at one dollar per bushel?

384. Add 5 dollars, 5 cents, 5 mills; seventy dollars, 7 mills; nine dollars, eight cents, six mills; and three dollars, four cents, two mills.

385. If 42 cords of wood cost $136.50, what cost 28 cords?

386. A lady having $75 spent $46.37½ in shopping; how much was left?

387. A man buys a horse for $355.12½, and gives in payment a five hundred dollar bill; how much should he receive back?

388. What cost 525 bales of cloth at $472.25 per bale?

389. At $7.63 per barrel, how many barrels of flour can be purchased for $5180.77?

390. If 123 tons of coal cost $848.70, what will be the cost of 265 tons?

391. A person having bought a bill of goods amounting to $87.12½, gave in payment a hundred dollar bill; how much change did he receive?

392. At twenty-four dollars and five cents a ton, how much will 95 tons of hay cost?

393. If 250 barrels of flour cost $1312.50, what is the price per barrel?

394. If 29 bushels of corn cost $36.308, what is the price per bushel?

395. How much must you add to $62.37½ to make $100?

396. If 12 cords of wood cost $90, what will 50 cords cost?

397. A man had $600; he bought a horse for $225, a carriage for $190.12, and a harness for $40 and 5 mills; how much had he left?

398. Reduce 16 T. 2 cwt. 75 lb. 7 oz. to ounces.
399. Reduce 917482 grains Troy to pounds.
400. How many grains in 7 ℔ 5 ℥ 6 ʒ 2 ℈ 10 gr.?
401. In 21 lb. 9 oz. 4 pwt. 15 gr., how many grains?
402. In 217532 grains Apothecaries, how many pounds?
403. Change 472 lb. 10 oz. 14 pwt. to pennyweights.
404. Change 378641 lbs. to tons.
405. Change 19 lb. 4 oz. 11 pwt. 15 gr. to grains.
406. In 865904 grains Apothecaries, how many pounds?
407. Reduce 57 T. 11 cwt. 48 lb. 12 oz. to ounces.
408. In 563427 ounces, how many tons?
409. How many lbs. Troy in 517823 grains?
410. How many lbs. in 37 T. 19 cwt. 75 lb.?
411. In 450325 oz., how many tons?
412. How many pounds in 142524 pennyweights?
413. Reduce 12 ℔ 8 ℥ 5 ʒ 2 ℈ to grains?
414. In 4753814 oz., how many tons?
415. Reduce 5 T. 3 cwt. 71 lb. to ounces.
416. In 74867 scruples, how many pounds?
417. Change 144 lb. 11 oz. Apothecaries to drams.
418. How many cwt. in 436287 ounces?
419. Reduce 37 lb. 6 oz. 13 pwt. 19 gr. to grains.
420. Reduce 40 T. 5 cwt. 24 lb. to ounces.
421. Reduce 1274215 grains Troy to lbs.
422. In 25 T. 15 cwt., how many pounds?
423. In 9 lb. 10 oz. 17 pwt., how many grains?
424. How many scruples in 23 lb.?
425. How many lb. of hay in 5 T. 97 lb.?
426. Reduce 12 lb. 5 oz. 10 pwt. to grains.
427. How many grains in a gold pitcher weighing 4 lb.?
428. How many pounds in 23040 grains Troy?
429. How many lbs. of sugar in a box containing 3 T. 5 cwt.?
430. In 8 ℥ 5 ʒ 2 ℈ 10 gr., how many grains?
431. Reduce 9870 ℈ to higher denominations.
432. In 7 lb. 3 oz. 10 pwt. 20 gr., how many grains?
433. Reduce 12 T. 4 cwt. 24 lb. 15 oz. to ounces.
434. How many oz. in a bale of cotton weighing 395 lb.?
435. How many gr. in a silver cup weighing 9 oz. 18 pwt.?

436. Reduce 6 m. 214 rd. 4 yd. to inches.
437. Reduce 18 C. 5 c. ft. 12 cu. ft. 429 cu. in. to cubic inches.
438. How many links in 7 m. 4 cha. 5 rd.?
439. How many sq. in. in 12 A. 137 sq. rd.?
440. Change 69473541 sq. in. to acres.
441. Required the number of yards in 96 m. 124 rd.
442. Reduce 7 m. 127 rd. 13 ft. to inches.
443. Required the number of miles in 546729 inches.
444. Change 17 cords 43 cu. ft. to cubic inches.
445. Change 17 cords 2 c. ft. 12 cu. ft. to cubic inches.
446. Reduce 54 A. 129 rd. to square yards.
447. Reduce 4375672 cu. in. to cords.
448. Reduce 35 m. 125 rd. 2 yd. to inches.
449. Find the number of cords in 754367 inches.
450. How many miles in 51708443 sq. ft.?
451. Required the number of links in 78 m. 9 ch. 15 l.
452. Reduce 470 rods, 4 yds. 2 ft. 11 in. to inches.
453. How many sq. rods in 1574753 sq. in.?
454. In 8 m. 97 rd. 5 yd. 3 ft. 9 in., how many inches?
455. Change 5764986 cu. in. to cubic yards.
456. Reduce 21 sq. mi. 3 A. 39 sq. rd. to sq. ft.
457. Reduce 88794763 in. to higher denominations.
458. Change 10 mi. 8 ch. to links.
459. Reduce 27 m. 232 rd. 13 ft. 9 in. to inches.
460. Reduce 15342174 in. to cords.
461. Reduce 453726 sq. in. to higher denominations.
462. How many sq. yds. in 5 A. 120 rd.?
463. How many cu. in. in 40 C. 6 c. ft. 12 cu. ft.?
464. Reduce 8 mi. 3 yd. 2 ft. 6 in. to inches.
465. Change 3 A. 5 sq. rd. 12 sq. yd. 2 sq. ft. to sq. in.
466. Change 123456 sq. in. to higher denominations.
467. How many cu. in. in 4 C. 3 c. ft. 12 cu. ft. 1000 cu. in.?
468. Reduce 35678 ft. to higher denominations.
469. Reduce 763456 in. to higher denominations.
470. In 12 C. 100 cu. ft. 728 cu. in., how many cubic inches?
471. How many sq. feet in 50 miles?
472. Change 79846 sq. yd. to higher denominations.
473. Reduce 25 mi. 315 rd. 4 yd. to feet.

474. Reduce 12 bu. 3 pk. 3 qt. 1 pt. to pints.
475. Reduce 894324 gills to gallons.
476. How many cords in 452382 cu. ft.?
477. How many square feet in 2 A. 115 sq. rd. 200 sq. ft.?
478. Reduce 4 mi. 213 rd. 15 ft. to inches.
479. How many ounces in 5 T. 2 cwt. 20 lb.?
480. Reduce 38 ℔ 3 ℥ 2 ʒ 2 ℈ 5 gr. to grains.
481. How many grains in 35 lb. 11 oz. 16 pwt.
482. Reduce 497812 farthings to higher denominations.
483. Reduce 7386541 pwt. to higher denominations.
484. Reduce 296814 scruples to higher denominations.
485. 2863458 oz. Avoirdupois to higher denominations.
486. How many inches in 50 mi. 37 rd. 12 ft. 4 in.?
487. In 5229428 links how many miles, chains, etc.?
488. Reduce 12 cu. yd. 8 cu. ft. 376 cu. in. to inches.
489. How many gallons in 32684 gills?
490. Reduce 315° 42′ 18″ to seconds.
491. How many minutes in 5 y. 7 mo. 4 da. 9 h.?
492. Reduce 60 gal. 3 qt. 1 pt. to gills.
493. Reduce 512473 sq. ft. to yds., etc.
494. In 391652 oz., how many lbs., cwt., etc.?
495. Reduce 9 lb. 6 oz. 2 sc. 15 gr. to grains.
496. In 57 lb. 6 oz. 0 pwt. 13 gr., how many grains?
497. How many farthings in £43 10s. 11d.?
498. Reduce 864325 grains Troy to higher denominations.
499. In 8 T. 15 cwt. 76 lb., how many ounces?
500. How many square miles, etc., in 5721432 sq. in.?
501. In 25 mi. 30 rd. 14 ft., how many inches?
502. Reduce 4 m. 16 cha. 3 l. to links.
503. How many sq. ft. in 30 A. 130 rd. and 200 sq. ft.?
504. In 3756243 cu. in., how many cords?
505. Reduce 57 gal. 3 qt. 0 pt. 3 gi. to gills.
506. How many degrees in 47295 seconds?
507. How many guineas in 57684 pence?
508. In 46 lb. 10 pwt. 15 gr., how many grains?
509. Reduce 7324251 ounces to tons, etc.
510. Reduce 6249687 sq. in. to higher denominations.
511. Reduce 15472 links to higher denominations.

512. What is the value of 15 lb. of gold at 4 cts. per gr.?

513. What is the value of 19 bu. of beans at 12½ cts. per qt.?

514. How many quart boxes will be required to hold 78 bu. 1 pk. 6 qt. of grapes?

515. Required the price of 1 T. 14 cwt. 16 lb. of butter at 3 cts. per oz.?

516. How many cords of wood in a pile 132 ft. long, 24 ft. wide, and 14 ft. high?

517. At $.015 a pound what will be the cost of 30 T. 15 cwt. of hay?

518. How many half-pint bottles are required to hold 725 gal. 2 qt. of wine?

519. If 1 oz. of sugar cost 1 ct. what will be the cost of 5 T. 9 cwt. 75 lb.?

520. How many times can you fill a half bushel measure from 15872 pints?

521. What is the value of 3 doz. silver spoons, each weighing 2 oz., at 4 cts. a pwt.?

522. How many minutes in the month of February, 1872?

523. What is the cost of a field containing 128 acres, at 25 cts. per rd.?

524. In a pile of wood 117 ft. long, 15 ft. wide, and 12 ft. high, how many cords?

525. How many townships, each 6 miles square, in 967680 acres?

526. What will be the cost of 560 gallons of vinegar at 2 cts. per gill?

527. How many acres in a farm 225 rds. long and 175 rds. wide?

528. How much will it cost to carpet a room 18 ft. long and 15 ft. wide, at $2.35 per yd.?

529. How many cubic feet in a room 18 ft. long by 17 ft. wide and 15 ft. high?

530. How many square ft. in the walls of the above room?

531. How many yards in a garden 78 ft. long and 72 ft. wide?

532. When gold is worth $.96 a pwt. what is the value of 6 lb.?

533. How many acres in 25 townships, each 6 miles square?

534. How many acres in 25 townships, each containing 6 square miles?

535. What is the cost of 4 T. 85 lb. of lead at 7 mills per oz.?

536. How many cubic yards must be removed in digging a ditch 423 ft. long, 6 ft. wide, and 3 ft. deep?

537. How many doz. eggs at 25 cts. per doz. will pay for 2 T. 1 cwt. 26 lb. of sugar, at $.125 a pound?

538. How many pounds of rice at 12 cts. a pound will pay for 4 bu. 2 pk. of nuts at 8 cts. a pint?

539. How many tons of timber at $12 per ton will pay for 15 T. 9 cwt. of cotton at 16 cts. a pound?

540. Bought 130 gallons of molasses for $60, and retailed it at 10 cts. a pint. How much was gained?

541. How many jars will be required to hold 2 T. 5 cwt. of butter, if 1 jar will hold 50 lb.?

542. What is the value of 5 cwt. 12 lb. of gum Arabic at 4 cts. per oz.?

543. What cost a pile of wood 40 ft. long, 12 ft. wide, and 4 ft. high, at $8 per cord?

544. If 1 qt. of nuts costs 12 cts., how many bushels can be purchased for $25.08?

545. How many doses of medicine of 15 gr. each in 2 pounds?

546. What will it cost to dig a cellar 21 ft. long, 18 ft. wide, and 6 ft. deep, at 30 cts. a yard?

547. What cost a tract of land 5 miles square, at $20 per acre?

548. If it requires 9 oz. of silver to make a cup, how many cups can be made from 36 lb.?

549. What is the sum of £36 15s. 6d.; £52 4s. 6d.; £75 12s. 11d.; £425 10s. 10d.; £17 5s. 4d.?

550. Add 4 lb. 11 oz. 12 pwt. 8 gr.; 9 lb. 10 oz. 15 pwt. 6 gr.; 16 lb. 9 oz. 7 pwt. 12 gr.; 20 lb. 6 oz. 13 pwt. 20 gr.

551. What is the difference between 25 lb. 6 oz. 3 dr. 2 sc., and 12 lb. 9 oz. 6 dr. 15 gr.?

552. Find the sum of 8 T. 16 cwt. 12 lb. 14 oz.; 12 T. 4 cwt. 18 lb.; 5 T. 13 cwt. 9 oz.; 57 T. 23 lb. 13 oz.; 19 cwt. 17 lb. 8 oz.

553. How many cords in four piles of wood measuring as follows: 18 cd. 13 cu. ft.; 12 cd. 7 cd. ft.; 21 cd. 4 cu. ft.; 65 cd. 15 cu. ft.?

554. Add 57 A. 25 rd. 15 yd.; 129 A. 18 rd.; 37 A. 50 rd. 13 yd.; 75 A. 12 yd.; 35 rd. 10 yd.

555. Find the time from May 4th, 1867, to March 1st, 1871.

556. Add 15 cwt. 19 lb. 14 oz.; 172 T. 12 lb. 10 oz.; 13 cwt. 7 lb. 5 oz.; 45 T. 11 cwt. 10 oz.; 29 T. 15 cwt. 17 lb.; 14 cwt. 21 lb. 12 oz.

557. Subtract 8 bu. 3 pk. 7 qt. 1 pt. from 47 bu. 1 pk. 5 qt.

558. Add 30° 45′ 14″; 27° 15′ 40″; 16° 12′ 50″; 21° 42″; 18′ 40″.

559. From 37 T. 12 cwt. take 19 T. 14 cwt. 20 lb. 9 oz.

560. Find the time from March 7, 1865, to February 20, 1870.

561. Add 125 gal. 3 qt. 1 pt. 2 gi.; 75 gal. 2 qt. 1 pt. 3 gi.; 45 gal. 3 qt. 2 gi.; 39 gal. 1 qt. 1 pt.; 250 gal. 2 qt. 1 pt.

562. What is the sum of 39 mi. 36 rd. 15 ft. 4 in.; 50 mi. 25 rd. 12 ft.; 27 rd. 9 ft. 11 in.; 500 mi. 35 rd. 11 ft. 9 in.?

563. From a pile of wood containing 29 cords I sold 12 cd. 5 cd. ft. 12 cu. ft. How much remained?

564. Add 43 A. 32 rd. 127 ft.; 240 A. 20 rd. 200 ft.; 95 A. 25 rd. 75 ft.; 12 A. 100 ft.; 137 rd. 30 ft.

565. From 100 mi. take 36 rd. 2 yd. 1 ft. 10 in.

566. Required the time from July 4, 1867, to May 2, 1872.

567. How much wood is there in three piles, the first of which contains 12 cd. 4 cd. ft. 7 cu. ft., the second 9 cd. 12 cu. ft., and the third 20 cd. 6 cd. ft. 5 cu. ft.?

568. A note dated June 12, 1868, was paid September 3, 1871. How long did it remain unpaid?

569. Add 15 bu. 3 pk. 6 qt.; 9 bu. 4 qt. 1 pt.; 2 pk. 5 qt. 1 pt.; 30 bu. 1 pk. 3 qt. 1 pt.

570. Required the time from December 14, 1799, to January 1, 1872.

571. Find the sum of 42 A. 137 rd. 5 yd.; 17 A. 27 yd.; 20 A. 96 rd. 12 yd.; 45 A. 113 rd. 16 yd.

572. Required the time from February 22, 1732, to December 14, 1799.

573. The latitude of New York is N. 40° 42′ 40″. Portland N. 43° 39′. What is the difference?

574. Washington is 77° 2′ W. lon. St. Louis 89° 36′ W. lon. Required the difference.

575. Boston is 42° 21′ 22″ N. lat. Buenos Ayres 34° 36′ S. lat. What is the difference?

576. Chicago is in 42° N. lat. New Orleans nearly 30° N. lat. Required the difference.

577. The longitude of Boston is 71° W. San Francisco 122° W. What is the difference?

578. Constantinople is in 41° N. lat. St. Petersburg 60° N. lat. What is the difference in miles?

579. Washington is 38° 53′ 23″ N. lat. Montreal 45° 31′. Required the difference.

580. New York is 74° W. lon. Rome 12° 28′ 40″ E. lon. What is the difference?

581. Portland is 70° 20′ W. lon. Cairo 31° E. lon. What is the difference?

582. Havana is 82° 22′ W. lon. Detroit 82° 58′. What is the difference?

583. How many square inches in three boards, the first measuring 15 ft. 10 in., the second 21 ft. 9 in., and the third 27 ft. 4 in.?

584. Multiply 45 bu. 3 pk. 6 qt. 1 pt. by 15.

585. Divide 18 lb. 3 oz. 15 pwt. 8 gr. by 4.

586. What is the product of £27 15s. 11d. 2qr. multiplied by 8?

587. Find the quotient of 57 mi. 4 rd. 12 ft. divided by 6.

588. Multiply 37 T. 12 cwt. 5 lb. 9 oz. by 12.

589. Find the product of 3 w. 6 da. 11 h. 27 m. 47 sec. × 11.

590. Divide 212 mi. 26 rd. 2 yd. by 7.

591. Divide 143 bu. 2 pk. 2 qt. 1 pt. by 9.

592. Required the product of 2 T. 5 cwt. 20 lb. 13 oz. × 9.

593. Required the quotient 30 bu. 3 pk. 6 qt. 1 pt. ÷ 11.

594. Divide 131 lb. 2 oz. 15 pwt. 20 gr. by 50.

595. What is the product of 16 A. 125 rd. multiplied by 12?

596. How many times is 8 contained in £185 17s. 6d.?

597. Multiply 38 cd. 54 cu. ft. 143 in. by 5.

598. Divide 34 A. 32 rd. 8 yd. 5 ft. 48 in. by 12.

599. How many times is 8 contained in 21 T. 5 cwt. 21 lb.?

600. Multiply 12 mi. 37 rd. 4 yd. 2 ft. 9 in. by 15.

601. Find the quotient of £147 17s. 4d. 2qr. ÷ 24.

602. Divide 43 cd. 4 cd. ft. 11 cu. ft. 1512 in. by 18.

603. Multiply 17 y. 27 da. 22 h. 30 m. 40 sec. by 12.

604. What is the product of 9 mi. 30 rd. 4 yd. 2 ft. 6 in. × 6?

605. What is the quotient of 427 lb. 11 oz. 18 pwt. 19 gr. ÷ 27?

606. Multiply 87 lb. 8 oz. 19 pwt. 21 gr. by 3.

607. Multiply 3 mi. 38 rd. 4 yd. 11 in. by 3.

608. Required the quotient 5 mi. 75 A. 24 rd. ÷ 2.

609. Divide 17 A. 21 rd. 20 yd. 5 ft. by 11.

610. Required the product of 19 lb. 7 oz. 5 dr. 2 sc. × 8.

611. Multiply £17 19s. 9d. 3qr. by 7.

612. Divide 3 T. 4 cwt. 6 lb. 12 oz. by 7.

613. Multiply 20 mi. 25 rd. 15 ft. by 9.

614. What is the quotient of 28 gal. 3 qt. 1 pt. 2 gi. ÷ 6?

615. Required the product of 5 lb. 3 oz. 18 pwt. × 5.

616. Divide 19 T. 7 cwt. 14 lb. 10 oz. by 6.

617. Multiply 20 A. 30 rd. 15 yd. 6 ft. by 5.

618. Divide 8 cd. 3 cd. ft. 8 cu. ft. by 5.

619. Multiply 3 w. 2 da. 5 h. 35 m. 49 sec. by 4.

620. A silversmith bought a lot of gold weighing 2 lb. 6 oz. 12 pwt. for $550 and sold it at 5 cents a gr. How much did he gain?

621. How many yards in the four walls of a room 36 ft. long, 24 ft. wide, and 12 ft. high?

622. How many cubic feet in the above room?

623. How much will it cost to carpet the above room at $1.75 per square yard?

624. Bought 8 casks of wine, each containing 36 gal 3 qt., at 2 cents a pint. How much did it cost?

625. How many bales, each weighing 375 lb., will 36 T. 3 cwt. 75 lb. of hay make?

626. A gardener sold 9 bu. 2 pk. 2 qt. of strawberries at 32 cents per quart. How much did he receive?

627. A fruit dealer sold 649 baskets of peaches for $1590.05. What was the price per basket?

628. How many yards of cloth at $.20 per yard will pay for 5 barrels of cranberries, each containing 2 bu. 3 pk., at $.17 per quart?

629. How many cases of boots at $40 per case will pay for 15 T. 12 cwt. 60 lb. of rice at 8 cents a pound?

630. If $39.48 are paid for 28 bushels of wheat, what must be paid for 48 bushels?

631. Bought 5 T. 11 cwt. of iron at 7 cents a pound. How many cords of wood at $3.50 per cord will pay for the iron?

632. Name the leap years between 1871 and 1900.

633. Bought a wood lot containing 4 A. 90 rd. at 33 cents a rod, and paid for it with wood at $8.03 per cord. How many cords did it take?

634. If 200 lb. of pork are worth $19, what are 540 lb. worth?

635. How many farms of 80 acres each are contained in a township 6 miles square?

636. How many cords of bark at $12.50 per cord will pay for 2 T. 15 cwt. of leather at 20 cents a pound?

637. What is the cost of 25 reams 6 quires 15 sheets of paper, at 1 cent a sheet?

638. How many seconds in the month of January?

639. How many feet in a room 30 ft. long, 24 ft. wide, and 15 ft. high?

640. What will it cost to plaster the walls of the above room at $.20 per yard?

641. How much will it cost to plaster the ceiling at 25 cents a yard?

642. What cost a pile of wood 55 ft. long, 12 ft. wide, and 20 ft. high, at 1 dollar per cord feet?

643. How much rice at 8 cents a pound will pay for 5 bu. 3 pk. of cherries at 9 cents per quart?

644. Required the time from November 21, 1868, to June 16, 1871.

645. If 328 pounds of tea cost $249.28, what will 455 pounds cost?

646. If a man travel 317 mi. 140 rd. in fifteen days, how far will he travel in 1 day?

647. How many bushels of oats will a span of horses eat in 4 weeks, if they eat 24 quarts a day?

648. How many cords of wood at $9.50 per cord, will pay for 76 yd. of cloth at $2.50 per yd.?

649. What is the sum of the following distances: 5 mi. 15 rd. 4 yd.; 12 mi. 30 rd. 2 ft.; 2 mi. 36 rd. 2 ft.; 15 mi. 37 rd.?

650. If 1 acre of land produce 1 T. 19 cwt. 21 lb. of hay, what will 5 acres produce?

651. How many cubic yards in a cellar 42 ft. long, 24 ft. wide, and 6 ft. deep?

652. How many barrels of flour at $8.75 per barrel, will pay for 30 T. 12 cwt. of hops at 45 cents a pound?

653. A school-room, 36 ft. long by 30 ft. wide and 18 ft. high, contains how many feet of air?

654. How much will it cost to plaster the above room at 22 cents per yard; deducting 100 yards for windows, doors, &c.?

CHAPTER II.

COMMON AND DECIMAL FRACTIONS, WITH A REVIEW OF ALL PRECEDING SUBJECTS.

Required the

1. Greatest common divisor of 198, 297, and 99.
2. Least common multiple of 48, 20, 21, and 12.
3. Greatest common divisor of 864, 420, and 12.
4. Least common multiple of 8, 24, 32, 48, and 96.
5. Greatest common divisor of 96, 264, and 48.
6. Least common multiple of 15, 8, 11, and 5.
7. Greatest common divisor of 18, 30, and 48.
8. Least common multiple of 24, 180, 45, 60, and 15.
9. Greatest common divisor of 36, 108, and 252.
10. Least common multiple of 36, 24, 48, 72, and 30.
11. Greatest common divisor of 6, 9, 4, and 16.
12. Least common multiple of 16, 28, 63, and 35.
13. Greatest common divisor of 24, 96, and 144.
14. Least common multiple of 8, 10, 18, and 25.
15. Greatest common divisor of 120, 144, and 168.
16. Least common multiple of 13, 39, 56, and 63.
17. Greatest common divisor of 77, 132, and 154.
18. Least common multiple of 5, 12, 9, 15, and 18.
19. Greatest common divisor of 75, 225, and 450.
20. Least common multiple of 40, 28, 32, 6, and 4.
21. Greatest common divisor of 16, 24, and 36.
22. Greatest common divisor of 108, 63, and 45.
23. Least common multiple of 99, 11, 13, and 26.
24. Greatest common divisor of 66, 154, and 220.
25. Least common multiple of 5, 16, 24, and 32.
26. Greatest common divisor of 315, 945, and 63.
27. Least common multiple of 4, 5, 6, 7, and 8.

28. Reduce $\frac{180}{375}$ to its lowest terms.
29. Reduce $\frac{456}{84}$ to a mixed number.
30. Reduce $84\frac{1}{4}$ to an improper fraction.
31. Reduce $\frac{56}{656}$ to its lowest terms.
32. Reduce $79\frac{3}{40}$ to an improper fraction.
33. Reduce $\frac{3}{4}$ of $\frac{5}{7}$ of $\frac{2}{5}$ to a simple fraction.
34. Reduce $\frac{764}{37}$ to a mixed number.
35. Reduce $\frac{592}{999}$ to its lowest terms.
36. Reduce $\frac{387}{56}$ to a mixed number.
37. Reduce $\frac{2}{5}$ of $\frac{1}{4}$ of $\frac{7}{9}$ to a simple fraction.
38. Reduce $264\frac{5}{4}$ to an improper fraction.
39. Reduce $\frac{375}{525}$ to its lowest terms.
40. Reduce $\frac{482}{17}$ to a mixed number.
41. Reduce $\frac{4}{7}$ of $\frac{2}{5}$ of $\frac{6}{7}$ to a simple fraction.
42. Reduce $721\frac{3}{60}$ to an improper fraction.
43. Reduce $\frac{569}{19}$ to a mixed number.
44. Reduce $\frac{1576}{53}$ to a mixed number.
45. Reduce $\frac{351}{795}$ to its lowest terms.
46. Reduce $87\frac{3}{13}$ to an improper fraction.
47. Reduce $\frac{1}{2}$ of $\frac{6}{7}$ of $\frac{3}{5}$ to a simple fraction.
48. Reduce $\frac{6960}{7}$ to a mixed number.
49. Reduce $73\frac{5}{9}$ to an improper fraction.
50. Reduce $\frac{4}{9}$ of $\frac{2}{3}$ of $\frac{3}{4}$ to a simple fraction.
51. Reduce $598\frac{3}{5}$ to an improper fraction.
52. Reduce $\frac{855}{1655}$ to its lowest terms.
53. Reduce $\frac{1795}{23}$ to a mixed number.
54. Reduce $\frac{378}{4868}$ to its lowest terms.
55. Reduce $425\frac{8}{12}$ to an improper fraction.
56. Reduce $\frac{4230}{633}$ to a mixed number.
57. Reduce $\frac{7}{8}$ to twenty-fourths.
58. Reduce $\frac{378}{4768}$ to its lowest terms.
59. Reduce $492\frac{12}{13}$ to an improper fraction.
60. Reduce $\frac{5}{7}$ and $\frac{2}{5}$ to thirty-fifths.
61. Reduce $\frac{8}{9}$ of $\frac{5}{13}$ of $\frac{3}{7}$ to a simple fraction.
62. Reduce $\frac{57290}{47}$ to a mixed number.
63. Reduce $469\frac{7}{15}$ to an improper fraction.
64. Reduce 321 to fifths.
65. Reduce 519 to sevenths.

66. Reduce $\frac{8}{9}$, $\frac{6}{7}$, $\frac{1}{2}$ to the least common denominator.
67. Reduce $\frac{5}{50}\frac{3}{}$, $\frac{4}{9}$, $\frac{7}{2}$, $\frac{3}{5}$ to the least common denominator.
68. Reduce $\frac{1}{3}$, $\frac{5}{7}$, $\frac{1}{9}$, $\frac{2}{7}$ to the least common denominator.
69. Reduce $\frac{3}{17}$, $\frac{2}{15}$, $\frac{4}{25}$ to the least common denominator.
70. Reduce $\frac{3}{8}$, $\frac{10}{17}$, $\frac{1}{2}$, $\frac{5}{6}$ to the least common denominator.
71. Reduce $\frac{7}{12}$, $\frac{5}{8}$, $\frac{3}{5}$, $\frac{1}{2}$ to the least common denominator.
72. Reduce $\frac{7}{9}$, $\frac{4}{5}$, and $\frac{3}{7}$ to the least common denominator.
73. Reduce $\frac{9}{20}$, $\frac{5}{12}$, $\frac{3}{35}$, $\frac{8}{42}$ to the least common denom.
74. Reduce $\frac{35}{432}$, $\frac{28}{621}$, $\frac{32}{504}$ to the least common denom.
75. Reduce $\frac{27}{561}$, $\frac{9}{78}$ to the least common denominator.
76. Reduce $\frac{8}{36}$, $\frac{10}{12}$, $\frac{8}{16}$ to the least common denominator.
77. Reduce $\frac{3}{15}$, $\frac{21}{28}$, $\frac{5}{12}$, $\frac{8}{21}$ to the least common denom.
78. Reduce $\frac{4}{9}$ and $\frac{3}{5}$ of $\frac{4}{7}$ to the least common denom.
79. Reduce $\frac{1}{2}$, $\frac{2}{3}$, $\frac{3}{4}$ to the least common denominator.
80. Reduce $\frac{3}{7}$, $\frac{7}{12}$, $\frac{5}{21}$ to the least common denominator.
81. Reduce $\frac{5}{13}$, $\frac{3}{26}$, $\frac{5}{12}$ to the least common denominator.
82. Reduce $\frac{1}{2}$, $\frac{2}{6}$, $3\frac{1}{4}$, $\frac{1}{5}$ to the least common denominator.
83. Reduce $\frac{3}{4}$, $\frac{7}{8}$, $\frac{1}{5}$, $\frac{9}{10}$ to the least common denominator.
84. Reduce 9, $\frac{2}{3}$, $\frac{1}{15}$, $\frac{5}{6}$, $\frac{2}{9}$ to the least common denom.
85. Reduce $\frac{1}{2}$, $\frac{3}{7}$, $\frac{6}{7}$, $\frac{1}{8}$, $\frac{4}{9}$ to the least common denom.
86. Reduce $\frac{5}{12}$, $\frac{5}{8}$, $\frac{6}{10}$, $\frac{3}{5}$ to the least common denom.
87. Reduce $\frac{1}{7}$, $\frac{2}{9}$, $\frac{5}{6}$ to the least common denominator.
88. Reduce $\frac{1}{16}$, $\frac{3}{7}$, $\frac{2}{8}$, $\frac{4}{9}$ to the least common denominator.
89. Reduce $\frac{6}{12}$, $\frac{3}{5}$, $\frac{4}{8}$, $\frac{6}{30}$ to the least common denom.
90. Reduce $\frac{4}{15}$, $\frac{5}{11}$, $\frac{14}{22}$ to the least common denominator.
91. Reduce $\frac{11}{18}$, $\frac{6}{7}$, $\frac{3}{10}$, $\frac{7}{9}$ to the least common denominator.
92. Reduce $\frac{8}{9}$, $\frac{6}{8}$, $\frac{5}{7}$, $\frac{2}{3}$ to the least common denominator.
93. Reduce $\frac{3}{4}$, $\frac{5}{6}$, $\frac{4}{5}$, $\frac{2}{3}$ to the least common denominator.
94. Reduce $\frac{2}{3}$, $\frac{3}{7}$, $\frac{2}{9}$, $\frac{3}{2}$ to the least common denominator.
95. Reduce $\frac{17}{20}$, $\frac{6}{8}$, $\frac{4}{5}$, $\frac{3}{4}$ to the least common denominator.
96. Reduce $\frac{5}{12}$, $\frac{7}{18}$, $\frac{24}{572}$, $\frac{1}{2}$ to the least common denom.
97. Reduce $\frac{1}{2}$, $\frac{3}{4}$, $\frac{6}{12}$, $\frac{3}{2}$ to the least common denominator.
98. Reduce $\frac{9}{11}$, $\frac{5}{22}$, $1\frac{3}{3}$ to the least common denominator.
99. Reduce $\frac{40}{75}$, $\frac{4}{15}$, $\frac{6}{25}$, $\frac{1}{2}$ to the least common denom.
100. Reduce $\frac{14}{18}$, $\frac{7}{9}$, $\frac{5}{12}$, $\frac{4}{24}$ to the least common denom.
101. Reduce $\frac{1}{8}$, $\frac{7}{9}$, $\frac{5}{15}$, $\frac{2}{3}$ to the least common denominator.
102. Reduce $\frac{4}{7}$, $\frac{42}{68}$, $\frac{17}{28}$ to the least common denominator.
103. Reduce $\frac{27}{39}$, $\frac{2}{8}$, $\frac{8}{13}$ to the least common denominator.

104. Find the sum of $\frac{5}{18}$, $\frac{13}{24}$, $\frac{8}{12}$, and $\frac{5}{6}$.
105. Required the difference between $\frac{17}{18}$ and $\frac{8}{12}$.
106. Add together $\frac{4}{9}$, $\frac{2}{6}$, $\frac{1}{4}$, and $\frac{5}{12}$.
107. Required the difference between $\frac{15}{17}$ and $\frac{12}{13}$.
108. Find the sum of $\frac{6}{8}$, $\frac{3}{12}$, $\frac{5}{24}$, and $1\frac{7}{8}$.
109. Required the difference between $\frac{13}{15}$ and $\frac{14}{16}$.
110. Add $\frac{2}{3}+\frac{3}{4}+\frac{4}{5}+\frac{5}{6}$.
111. Subtract $\frac{1}{2}$ of $\frac{6}{12}$ from $\frac{3}{4}$.
112. Add together $6\frac{2}{3}$, $5\frac{1}{6}$, and $4\frac{3}{4}$.
113. Find the difference between $\frac{19}{21}$ and $\frac{23}{24}$.
114. Required the amount of $2\frac{3}{4}$, $3\frac{1}{5}$, and $7\frac{1}{2}$.
115. Subtract $15\frac{3}{4}$ from $328\frac{2}{5}$.
116. Required the sum of $\frac{7}{8}+\frac{3}{7}+\frac{1}{2}+\frac{5}{12}$.
117. Required the difference between $\frac{9}{11}$ and $\frac{15}{16}$.
118. Add together $12\frac{2}{3}$, $15\frac{2}{5}$, and $30\frac{2}{6}$.
119. Subtract $75\frac{3}{5}$ from 90.
120. Find the sum of $\frac{3}{12}$, $\frac{4}{5}$, $\frac{9}{15}$, and $\frac{1}{3}$.
121. Required the difference between $40\frac{5}{7}$ and $52\frac{1}{2}$.
122. Find the sum of $\frac{5}{6}$ of $\frac{2}{3}$ and $\frac{1}{4}$ of $\frac{4}{5}$.
123. Find the difference between $\frac{12}{17}$ and $\frac{35}{56}$.
124. Add $\frac{3}{7}$, $\frac{4}{9}$, $\frac{15}{21}$, and $\frac{42}{63}$.
125. Subtract $24\frac{5}{9}$ from $35\frac{2}{7}$.
126. Required the sum of $24\frac{1}{2}$, $18\frac{5}{12}$, and $9\frac{5}{6}$.
127. Required the difference between $\frac{13}{15}$ and $\frac{17}{20}$.
128. Find the sum of $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, and $\frac{1}{5}$.
129. Find the difference between $47\frac{2}{7}$ and 100.
130. Add together $\frac{5}{9}$, $\frac{4}{11}$, and $\frac{5}{12}$.
131. Subtract $18\frac{1}{2}$ from $25\frac{1}{3}$.
132. Required the sum of $\frac{11}{15}$, $\frac{9}{27}$, and $\frac{15}{36}$.
133. From $\frac{1}{2}$ of $\frac{6}{10}$ take $\frac{1}{2}$ of $\frac{9}{26}$.
134. What is the sum of $3\frac{1}{3}$, $\frac{7}{10}$, $\frac{5}{6}$, and $\frac{10}{15}$.
135. From $19\frac{1}{2}$ take $\frac{2}{3}$ of 19.
136. Required the amount of $12\frac{7}{8}+42\frac{3}{4}+29\frac{5}{6}$.
137. Find the difference between 957 and $429\frac{16}{17}$.
138. Add $37\frac{5}{6}+43\frac{4}{5}+57\frac{3}{4}+\frac{35}{36}$.
139. Subtract $\frac{3}{8}$ of $\frac{2}{3}$ from $\frac{2}{3}$ of $\frac{7}{9}$.
140. Required the amount of $\frac{12}{15}$, $\frac{5}{20}$, $\frac{7}{12}$, and $\frac{1}{2}$.
141. Subtract $\frac{4}{5}$ of 72 from 100.

142. What is the product of $\frac{2}{6}\frac{9}{4}$ multiplied by $\frac{1}{4}\frac{9}{7}$?

143. How much is $19\frac{3}{5}$ times $67\frac{9}{12}$?

144. Multiplicand 57, multiplier $\frac{9}{15}$; what is the product?

145. Multiply $\frac{5}{7}$ of $\frac{3}{4}$ by $\frac{8}{13}$ of $\frac{2}{5}$.

146. Multiply $17\frac{4}{5}$ plus $13\frac{2}{3}$ by $\frac{3}{4}$ of 27.

147. What is the product of $872\frac{4}{7}$ multiplied by $\frac{9}{12}$?

148. Multiplicand $\frac{3}{4}\frac{5}{2}$, multiplier $\frac{1}{1}\frac{2}{7}$; what is the product?

149. Ninety-seven times $175\frac{5}{8}$ are how many?

150. How many are $74\frac{9}{11}$ multiplied by $23\frac{4}{9}$?

151. What is the product of $\frac{5}{11}$ of $\frac{3}{7}$ multiplied by $12\frac{1}{2}$?

152. Multiply $27-13\frac{6}{8}$ by $11\frac{1}{4}$ plus $12\frac{1}{3}$.

153. Multiplicand $19\frac{7}{8}$, multiplier $\frac{1}{1}\frac{2}{3}$; required the product?

154. Multiply $\frac{4}{5}$ of $\frac{9}{11}$ by $\frac{6}{7}$ of $\frac{3}{4}$.

155. What is the product of $138\frac{1}{12}$ multiplied by $\frac{8}{9}$?

156. Seventy-eight times $135\frac{11}{13}$ are how many?

157. Multiplicand $\frac{5}{7}\frac{7}{4}$, multiplier $\frac{1}{2}\frac{4}{6}$; what is the product?

158. What is the result of $\frac{1}{1}\frac{3}{7}$ multiplied by $\frac{1}{2}\frac{8}{2}$?

159. What is the product of $29-15\frac{4}{11}$ multiplied by $13\frac{6}{7}$?

160. Multiply $36-15\frac{5}{9}$ by $67-24\frac{4}{9}$.

161. Eighteen multiplied by $\frac{7}{8}$ plus $13\frac{3}{4}$ are how many?

162. How many are 642 multiplied by $\frac{1}{1}\frac{5}{7}$?

163. Multiply $\frac{2}{3}$ of 751 by $\frac{3}{4}$ of 845.

164. How many are $16\frac{5}{9}$ multiplied by $51\frac{3}{5}$?

165. Fifty-six times $19\frac{6}{7}$ plus $25\frac{3}{9}$ are how many?

166. Multiplicand $\frac{5}{7}\frac{3}{5}$, multiplier $\frac{4}{5}\frac{1}{3}$; required the product.

167. What is the product of $\frac{2}{3}$ of $\frac{5}{6}$ multiplied by $\frac{1}{2}\frac{5}{0}$?

168. What is the product of $\frac{4}{5}\frac{7}{3}$ multiplied by $\frac{3}{5}$ of $\frac{4}{7}$?

169. Multiply $756\frac{5}{11}$ by $\frac{3}{4}$ of $\frac{6}{7}$ of $\frac{1}{2}$.

170. How many are $815\frac{5}{7}$ multiplied by $14\frac{7}{8}$?

171. What is the result of $\frac{1}{2}\frac{7}{4}$ multiplied by $\frac{1}{1}\frac{3}{8}$?

172. Multiply $11\frac{5}{9}\frac{5}{2}$ by $14\frac{1}{1}\frac{3}{6}$ plus $19\frac{1}{2}\frac{3}{4}$.

173. What is the product of 279 multiplied by $\frac{9}{1}\frac{}{3}$?

174. Multiply $\frac{1}{2}\frac{6}{5}$ of $\frac{3}{4}\frac{1}{0}$ by $\frac{1}{1}\frac{4}{7}$ of $\frac{2}{9}$.

175. Multiplicand $312\frac{5}{8}$, multiplier $\frac{8}{11}$; what is the product?

176. What is the product of $15\frac{1}{2}$ multiplied by $15\frac{1}{2}$?

177. Seventy-five multiplied by $\frac{2}{3}$ of $\frac{1}{1}\frac{1}{3}$ are how many?

178. Multiply $\frac{3}{7}$ of $\frac{5}{8}$ by $47-12\frac{7}{8}$.

179. What is the product of 625 multiplied by $13\frac{9}{11}$?

180. How many times is $31\frac{6}{24}$ contained in $12\frac{6}{12}$?

181. Divide $\frac{8}{12}$ of $\frac{4}{7}$ by $\frac{6}{8}$ of $1\frac{1}{2}$.

182. What is the quotient of $\frac{26}{150}$ divided by $\frac{50}{60}$.

183. Required the quotient of 250 divided by $\frac{4}{12}$ of $\frac{12}{18}$.

184. How many times is 7 contained in $\frac{1}{3}\frac{2}{9}$?

185. What is the quotient of $\frac{35}{7}$ divided by $\frac{3}{4}$ of 29?

186. How many times is $13\frac{7}{21}$ contained in 724?

187. What is the quotient of $\frac{75}{100}$ divided by $\frac{8}{10}$?

188. Dividend $19\frac{8}{24}$, divisor $47\frac{7}{14}$; what is the quotient?

189. Divide $5\frac{3}{4}+6\frac{2}{3}$ by $\frac{2}{5}$ of $\frac{1}{6}$.

190. How many times is $\frac{28}{35}$ contained in $\frac{49}{56}$?

191. How many times is 8 contained in $\frac{84}{105}$?

192. Required the quotient of 42 divided by $\frac{84}{96}$.

193. Dividend $75\frac{3}{26}$, divisor $3\frac{6}{42}$; required the quotient?

194. How many times $\frac{14}{16}$ contained in $\frac{12}{15}$?

195. What is the quotient of 140 divided by $\frac{12}{32}$?

196. How many times is $\frac{54}{63}$ contained in $\frac{18}{22}$?

197. Dividend $\frac{27}{32}$, divisor 140; what is the quotient?

198. How many times is $\frac{32}{48}$ contained in $30\frac{7}{14}$?

199. What is the quotient $\frac{32}{48}$ divided by $30\frac{7}{14}$?

200. Required the quotient of $\frac{24}{28}$ divided by $\frac{36}{81}$.

201. How many times is $\frac{72}{84}$ contained in $\frac{39}{45}$?

202. Divide $\frac{3}{8}$ of $\frac{5}{7}$ by $\frac{2}{3}$ of $\frac{7}{12}$.

203. Dividend $274\frac{9}{26}$, divisor 12; what is the quotient?

204. What is the quotient of 12 divided by $274\frac{9}{26}$?

205. How many times is $6\frac{18}{36}$ contained in $12\frac{3}{26}$?

206. Required the quotient of 523 divided by $\frac{1}{12}$.

207. What is the quotient of $\frac{1}{12}$ divided by 523?

208. How many times is $27\frac{5}{8}$ contained in $44\frac{3}{4}$?

209. Dividend $\frac{5}{7}$ of $\frac{3}{5}$, divisor $\frac{2}{3}$ of $\frac{4}{5}$; required the quotient?

210. Divide $13\frac{3}{4}+15\frac{7}{8}$ by $16\frac{4}{7}-5\frac{2}{3}$.

211. How many times is 150 contained in $\frac{17}{24}$?

212. How many times is $\frac{17}{24}$ contained in 150?

213. Divide $25\frac{3}{8}+14\frac{5}{8}$ by $18-2\frac{7}{8}$.

214. Dividend $37\frac{3}{7}$, divisor $12\frac{1}{2}+5\frac{2}{5}$; what is the quotient?

215. How many times is $12\frac{7}{8}$ contained in $\frac{5}{9}$?

216. What is the quotient of $\frac{34}{40}$ divided by $\frac{17}{23}$?

217. Required the quotient of $17\frac{2}{3}+27\frac{1}{4}$ divided by $\frac{7}{9}$?

218. Reduce $\frac{\frac{3}{4}}{\frac{5}{6}}$ to a simple fraction.

219. Reduce $\frac{1\frac{2}{5}}{\frac{2}{3}\frac{1}{4}}$ to a simple fraction.

220. Reduce $\frac{3\frac{5}{8}}{6\frac{4}{5}}$ to a simple fraction.

221. Reduce $\frac{6\frac{3}{5}}{17\frac{2}{7}}$ to a simple fraction.

222. Reduce $\frac{1\frac{3}{5}}{8\frac{4}{7}}$ to a simple fraction.

223. Reduce $\frac{34\frac{4}{5}}{21\frac{1}{3}}$ to a simple fraction.

224. Reduce $\frac{\frac{5}{4}\frac{3}{8}}{\frac{5}{2}}$ to a simple fraction.

225. Reduce $\frac{\frac{9}{11}}{\frac{1}{2}\frac{4}{2}}$ to a simple fraction.

226. Reduce $\frac{\frac{2}{4}\frac{8}{0}}{\frac{1}{3}\frac{7}{6}}$ to a simple fraction.

227. Reduce $\frac{\frac{1}{2}\frac{2}{6}}{\frac{1}{3}\frac{8}{2}}$ to a simple fraction.

228. Reduce $\frac{15\frac{2}{3}}{25}$ to a simple fraction.

229. Reduce $\frac{36}{\frac{8}{9}}$ to a simple fraction.

230. Reduce $\frac{4\frac{2}{5}}{1\frac{3}{2}}$ to a simple fraction.

231. Reduce $\frac{14\frac{3}{8}}{\frac{7}{9}}$ to a simple fraction.

232. Reduce $\frac{\frac{7}{9}}{14\frac{3}{8}}$ to a simple fraction.

233. Reduce $\frac{\frac{3}{4}\frac{7}{5}}{\frac{5}{8}}$ to a simple fraction.

234. Reduce $\frac{12\frac{3}{5}}{24}$ to a simple fraction.

235. Reduce $\frac{1\frac{9}{3}}{\frac{1}{1}\frac{2}{5}}$ to a simple fraction.

236. What is the value of $\frac{1}{13}$ of a ton?
237. Reduce 4 w. 6 da. 5 h. 30 min. to fraction of a year.
238. Reduce 12s. $11\frac{3}{4}$d. to the fraction of a pound.
239. What is the value of $\frac{8}{17}$ of an acre.
240. Reduce 3 A. 30 p. 108 in. to the fraction of a sq. mi.
241. Reduce 5 yd. 2 ft. 8 in. to the fraction of a mile.
242. What is the value of $\frac{3}{9}$ of a mile?
243. Reduce 15 cwt. 95 lb. 15 oz. to fraction of a ton.
244. What part of a pound is 9 oz. 15 pwt. 7 gr.?
245. Reduce 24 gal. 3 qt. 1 pt. to the fraction of a hhd.
246. What is the value of $\frac{4}{7}$ of a cord of wood?
247. Reduce $\frac{2}{3}$ of a yard to lower denominations.
248. 7 oz. 6 pwt. 16 gr. to the fraction of a pound.
249. Reduce $\frac{1}{1441}$ of a day to the fraction of a minute.
250. What is the value of $\frac{2}{9}$ of a year?
251. Reduce 236 rd. 1 ft. 1 in. to a fraction of a mile.
252. Reduce 3 ft. 11 in. to the fraction of a rod.
253. What part of a year is 8 m. 3 w. 15 da.?
254. What is the value of $\frac{5}{7}$ of a square mile?
255. What part of a cwt. is 71 lb. 14 oz.?
256. Reduce $\frac{5}{1008}$ of a cwt. to the fraction of a pound.
257. What is the value of $\frac{3}{14}$ of a year?
258. What part of 3 years is 25 da. 7 h. 40 min.?
259. Reduce 3 pk. 7 qt. 1 pt. to the fraction of a bushel.
260. What is the value of $\frac{2}{14}$ of a ton?
261. Reduce $\frac{5}{1771}$ of a bushel to the fraction of a quart.
262. Reduce 15 cwt. 1 qr. 87 lb. to the fraction of a ton.
263. Reduce 8 oz. 15 pwt. 20 gr. to fraction of a pound.
264. What is the value of $\frac{7}{22}$ of a square mile?
265. Reduce 1530 inches to the fraction of a cord.
266. What is the value of $\frac{4}{11}$ of a year?
267. What part of 5 gallons is 3 qt. 1 pt. 3 gi.?
268. Reduce 12 cwt. 75 lb. 9 oz. to the fractien of a ton.
269. Reduce 5 oz. 17 pwt. 13 gr. to the fraction of a pound.
270. Reduce 9 oz. 4 dr. 12 gr. to the fraction of a pound.
271. What is the value of $\frac{2}{7}$ of a mile?
272. What is the value of $\frac{3}{5}$ of a square mile?
273. What is the value of $\frac{7}{11}$ of an acre?

274. What quantity of molasses in 4 casks, containing severally $55\frac{1}{7}$ gal., $31\frac{3}{8}$ gal., $27\frac{2}{15}$ gal., and $58\frac{3}{17}$ gal.?

275. What is the cost of $486\frac{3}{4}$ bushels of corn at $62\frac{1}{2}$ cents per bushel?

276. At $\frac{11}{12}$ of a dollar a yard, how many yards of cloth can be bought for 9 dollars?

277. How many cords and cord feet of wood can be put into a shed 8 ft. by 18 ft. 7 in., and 10 ft. 5 in. high?

278. What quantity of loaf sugar must be sold at $\$.19\frac{3}{10}$ per lb., that the price shall amount to $524?

279. What is the least common multiple of 42, 9, 14?

280. What distance will a car run in $9\frac{3}{4}$ hours, allowing its velocity to be $23\frac{5}{8}$ miles an hour?

281. A man divided $\$2\frac{4}{5}$ among his children, giving them $\frac{7}{10}$ of a dollar apiece; how many children had he?

282. What cubical quantity of earth must be removed in digging a pit $13\frac{1}{2}$ ft. deep, $12\frac{1}{4}$ ft. long, and $9\frac{2}{3}$ ft. wide?

283. Reduce $\frac{3}{15}$ of $\frac{1}{14}$ of $\frac{21}{10}$ of $6\frac{5}{9}$ to a simple fraction.

284. At $\frac{4}{5}$ of a dollar a basket, how many baskets of peaches can be bought for $11\frac{1}{5}$ dollars?

285. What is the greatest common divisor of 21, 84, and 51?

286. What quantity of land in a lot, which is $65\frac{1}{2}$ rd. long and $47\frac{1}{8}$ rd. wide?

287. If a family use $19\frac{3}{5}$ pounds of butter in $7\frac{1}{3}$ days, how many pounds each day?

288. If $\frac{5}{8}$ of a ton of coal cost $6\frac{2}{3}$ dollars, what will 1 ton cost at the same rate?

289. If $\$\frac{5}{8}$ will buy $\frac{9}{10}$ of a basket of peaches, what is the price of $45\frac{2}{3}$ baskets?

290. What is the difference between $12\frac{3}{8}+5\frac{3}{4}$ and $9\frac{1}{3}+2\frac{2}{5}$?

291. If 1 yd. of ribbon costs $\$\frac{3}{8}$, how many yards can be bought for $25?

292. How many yards of cloth worth $\$\frac{7}{12}$ a yard must be given for 11 lb. of wool worth $\$\frac{6}{8}$ a pound?

293. Multiply $91\frac{7}{8}$ by $\frac{9}{10}$ of $2\frac{1}{4}+67\frac{1}{12}$.

294. What quantity of wood is there in a pile $14\frac{4}{12}$ ft. long, $3\frac{9}{12}$ ft. wide, and $6\frac{8}{12}$ ft. high?

295. If $5\frac{1}{3}$ bushels of potatoes cost $2\frac{3}{5}$ dollars, how much do they cost a bushel?

296. How much land is there in a square lot, measuring $374\frac{1}{2}$ rods on every side?

297. How many cords, and what will be the cost, at $\$4\frac{56}{100}$ per cord, of wood in a pile $40\frac{1}{2}$ ft. long, 6 ft. high, and 8 ft. wide?

298. If $\frac{3}{4}$ of a bushel of oats feed a horse one day, how long will $75\frac{9}{10}$ bushels feed him?

299. Multiply eight hundred seventy thousand six hundred fifty-one, by three hundred seven thousand four.

300. If John can walk 21 miles in $\frac{7}{9}$ of a day, how far can he walk in 1 day?

301. Reduce $\frac{3}{16}$, $\frac{2}{27}$, and $\frac{5}{6}$ to the least common denom.?

302. What is the difference between $\frac{3}{8}$ of 69 and $\frac{2}{3}$ of 84?

303. A man had three bins of grain; in the first $81\frac{1}{36}$, in the second $117\frac{2}{87}$, and in the third $145\frac{6}{17}$; how many in all?

304. What is a pile of wood worth which is 112 ft. long, 4 ft. wide, and $6\frac{1}{4}$ ft. high, at $\$4\frac{1}{2}$ a cord?

305. If a man travel $\frac{7}{8}$ of a mile in 1 hour, how long will it take him to travel 10 miles?

306. How much will it cost to pave a street $\frac{1}{2}$ mi. long and $2\frac{1}{4}$ rd. wide, at \$12 a square rod?

307. How many square yards in a floor $18\frac{1}{2}$ ft. long and $15\frac{3}{4}$ ft. wide?

308. If $18\frac{3}{4}$ yards of cloth cost \$75, how many yards can be bought for \$225?

309. How many yards of ribbon at $\$.28\frac{3}{4}$ per yard must be given for 18 quarts of berries at 35 cents per quart?

310. Multiply $12\frac{3}{4}$ by $9\frac{5}{8}$, and divide the product by $5\frac{3}{5}$.

311. What is the value of $14\frac{2}{3}$ yd. of calico at $\$.12\frac{1}{2}$ per yd., and 6 yd. of ribbon at $48\frac{3}{4}$ cents a yard?

312. What is the value of a pile of wood 48 ft. long, $8\frac{3}{4}$ ft. wide, and 4 ft. high, at $\$7\frac{1}{2}$ a cord?

313. Reduce $\frac{7}{8}$, $\frac{4}{9}$, and $\frac{5}{7}$ to a common denominator.

314. From forty trillions, 160 billions, 42 millions, 16 thousand, 4 hundred, take 3 trillions, 63 billions, 41 hundred.

315. A regiment lost 244 men in battle, which was $\frac{2}{9}$ of the regiment; what was the number of men before the battle?

316. If $\frac{2}{3}$ of an acre of land costs $\$66\frac{2}{3}$, how much will $8\frac{3}{4}$ acres cost?

317. If $13\frac{5}{8}$ cords of wood cost $\$61\frac{3}{4}$, what is the price per cord?

318. What is the difference between $13+15\frac{3}{5}$ and $12\frac{3}{4}+6\frac{1}{2}$?

319. If $\frac{6}{11}$ of a ton of hay costs $\$12\frac{3}{8}$, what will $5\frac{3}{7}$ tons cost?

320. How many pounds of coffee worth $\$\frac{3}{8}$ a pound must be given for 12 bushels of apples worth $\$\frac{5}{6}$ per bushel?

321. If 27 bushels of potatoes cost $\$18\frac{3}{5}$, how many bushels can be purchased for $\$72\frac{5}{8}$?

322. How many quarts of berries at 27 cents a quart will pay for $25\frac{2}{3}$ yards of carpeting at $\$1\frac{3}{8}$ per yard?

323. If 57 yards of cloth cost $\$197\frac{1}{2}$, what will $87\frac{2}{3}$ yards cost?

324. What will $45\frac{9}{12}$ dozen eggs cost at $\$.22\frac{3}{4}$ per dozen?

325. How many pairs of pants can be made from $196\frac{7}{8}$ yd. of cloth, allowing $2\frac{5}{8}$ yards per pair?

326. How many bushels of potatoes worth $57\frac{1}{2}$ cents a bushel will pay for 75 bushels of corn at $\$.85\frac{3}{4}$ a bushel?

327. How many cubic feet in a wall $27\frac{1}{4}$ ft. long, $6\frac{1}{2}$ ft. high, and $2\frac{3}{4}$ ft. thick?

328. At $33\frac{1}{3}$ cents a pound, how many pounds of coffee can be purchased for $\$4.66\frac{2}{3}$?

329. From one hundred millions, two hundred forty-seven thousand, take one million four hundred nine.

330. Find the difference between $4\frac{1}{6} \times 7\frac{2}{3}$ and $5\frac{7}{12} \div 1\frac{8}{9}$.

331. From $16\frac{3}{5}$ yards of ribbon $12\frac{2}{13}$ yards have been cut off; how many are left?

332. Four pieces of cloth contain the following number of yards: $15\frac{3}{5}$, $12\frac{7}{8}$, $16\frac{2}{3}$, and $14\frac{1}{4}\frac{1}{3}$; how many yards in all the pieces?

333. What is the difference between $\frac{5}{6} \times \frac{3}{7}$ and $\frac{2}{3}$ of $\frac{4}{5}$?

334. What cost $247\frac{2}{3}$ A. of land at $\$53\frac{3}{8}$ per A.?

335. If $28\frac{7}{9}$ A. of land cost $\$625\frac{3}{8}$, what cost 10 A.?

336. Add $47\frac{5}{7}$, $145\frac{2}{9}$, $16\frac{1}{2}\frac{5}{1}$, $125\frac{1}{6}\frac{8}{3}$, $13\frac{1}{2}$, and $12\frac{2}{3}$.

337. Which is the greater, $\frac{1}{1}\frac{1}{2} \times \frac{7}{8}$, or $\frac{1}{1}\frac{1}{2} + \frac{7}{8}$; and how much?

338. What do I receive per pound by selling $16\frac{3}{4}$ pounds of tea for $21\frac{7}{8}$ dollars?

339. What cost $22\frac{3}{4}$ bales of cotton, each weighing $4\frac{3}{4}$ cwt., at $\$24\frac{3}{8}$ per cwt.?

340. A pole stands $\frac{1}{4}$ in the ground, $\frac{1}{3}$ in the water, and 15 feet above the water. What is the length of the pole?

341. How many pounds of maple sugar at $17\frac{1}{2}$ cents a pound will pay for $24\frac{2}{3}$ pounds of coffee at $27\frac{3}{4}$ cents a pound?

342. A man owing $96, paid at one time $\$24\frac{5}{1\,2}$, and at another time $\$43\frac{3}{4}$. How much does he still owe?

343. If one yard of broadcloth cost $\$4\frac{7}{8}$, how many yards can be purchased for $\$124\frac{5}{6}$?

344. If one pound of coffee cost $32\frac{2}{3}$ cents, what must be paid for $97\frac{3}{4}$ pounds?

345. If $35\frac{3}{5}$ tons of hay are sold for $880, what will $18\frac{6}{7}$ tons cost?

346. I exchanged $15\frac{3}{7}$ cords of bark at $\$9\frac{3}{5}$ per cord, for flour at $\$11\frac{3}{4}$ per barrel. How much flour did I receive?

347. Having paid out $\frac{1}{3}$ and $\frac{1}{4}$ of my money, I had 55 dollars left. How much had I at first?

348. A pole is $\frac{1}{4}$ in the mud and $\frac{2}{5}$ in the water, and 14 feet above the water. What is its length?

349. How many acres in a piece of land $127\frac{3}{5}$ rods long and $96\frac{3}{4}$ rods wide?

350. Multiply 87 ten thousandths by 27 hundredths.
351. Multiply 462 millionths by 643 thousandths.
352. Multiply 25 hundredths by 25 hundredths.
353. Multiply 643 hundred thousandths by 482.
354. Multiply 52 and 52 hundredths by 15 and 9 tenths.
355. Multiply 375 thousandths by 375 thousandths.
356. Multiply fifteen hundred by fifteen hundredths.
357. Multiply ninety-five and 72 millionths by thirty-seven
358. Multiply 455 thousandths by eight and six-tenths.
359. Multiply 62 hundredths by 62 thousandths.
360. Multiply 7854 by twenty-four ten millionths.
361. Multiply 69 thousand and 69 thousandths by 48.
362. Multiply 365 thousandths by 456 ten thousandths.
363. Multiply 7564 millionths by forty-seven hundredths.
364. Multiply twenty-four millions by 84 millionths.
365. Multiply 476.042 by forty-five and eight-tenths.
366. Multiply 980 ten thousandths by 76.
367. Multiply twenty-seven and fifteen thousandths by .018.
368. Multiply 507.32 by 315 ten thousandths.
369. Multiply 527 ten thousandths by 8 hundredths.
370. Multiply twenty-five thousandths by 12 hundredths.
371. Multiply 67.035 by forty-three ten thousandths.
372. Multiply 87 millionths by seventy-five thousandths.
373. Multiply sixty-seven hundredths by 19 hundredths.
374. Multiply 340000 by three hundred forty thousandths.
375. Divide 579 by seventy-five thousandths.
376. Divide 6.9705 by fifty-four hundredths.
377. Divide seven hundred twenty-eight by 13 hundredths.
378. Divide one and three-tenths by 137 and 8 tenths.
379. Divide 46 and 28 hundredths by 65 ten thousandths.
380. Divide 33 ten thousandths by 64 thousandths.
381. Divide eighteen by six-tenths.
382. Divide six-tenths by eighteen.
383. Divide forty-five thousand by fifty-four thousandths.
384. Divide forty-five thousandths by fifty-four thousand.
385. Divide 1754 by twenty-three and five hundredths.
386. Divide one hundred twenty-five by 425.
387. Divide one hundred twenty-five by .425.

388. Divide twenty-three and five hundredths by 1754.
389. Divide seven hundredths by twelve millionths.
390. Divide 427348 by forty-seven ten thousandths.
391. Divide four hundred ninety thousand by .243.
392. Divide 3472 by 87.349.
393. Divide four hundred and ninety thousand by 4.98.
394. Divide 3472 by .87349.
395. Divide four hundred and seventy-five by 54268.
396. Divide twelve by eight thousand and forty-nine.
397. Divide 1649 by four hundred and ninety thousand.
398. Divide forty-seven by 342 ten thousandths.
399. Divide 342 ten thousandths by forty-seven.
400. Divide 175 by twenty-five thousandths.
401. Multiply .35 by .43 and divide the product by $\frac{9}{10}$.
402. Divide 18.05 by 2.4 and multiply the quotient by .015.
403. Multiply 437 by nine hundredths and divide by .012.
404. Divide .075 by 300 and divide quotient by .6.
405. Multiply 45.2 by 5 tenths and the product by .008.
406. Multiply .12 by 74 and divide the product by 87.
407. Divide 427 by eighteen hundredths and multiply by 52.
408. Divide 194.8 by .0033 and multiply the quotient by 78.
409. Divide 427 by .835 and multiply the quotient by $\frac{7}{10}$.
410. Multiply $.25 \times .25$ and divide the product by 136.
411. $4725.68 \div 12.4 \times 7 + 4725 =$ what?
412. Multiply 1500 by 15 thousandths and add 470.053.
413. Divide 1000 by 4 thousandths and subtract .000008.
414. Multiply 1000 by 4 thousandths and add 2 millionths.
415. (52763 × 5 ten thousandths + 42.324) ÷ 4 tenths = what?
416. Divide 247.6156 by 1433 and multiply by .06.
417. Divide 1364.251 by 46.3 and multiply by seven-tenths.
418. Multiply 19 ten thousandths by 425 and divide by .75.
419. Multiply 1.70254 by 4 tenths and add 25000.
420. Divide 4295 by 674295 and subtract 572 millionths.
421. Divide 1258 by .045 and subtract 35 ten thousandths.
422. Multiply 27 millionths by .12 and divide by .254.
423. Divide 427.3 by .25764 and add 10000 to the quotient.
424. Divide twenty-five by 175 and multiply by .25.
425. Divide 475 by 325 ten thousandths.

426. Reduce 13s. 5d. 3 far. to the decimal of a pound.
427. Reduce 8 oz. 2 pwt. 6 gr. to the decimal of a pound.
428. What is the value of .47524 of a cwt. ?
429. Reduce 7 fur. 25 rd. 2 yd. 1 ft. to the decimal of a mile.
430. What is the value of .4627 of a ton ?
431. Reduce $\frac{2}{3}\frac{4}{2}$ to a decimal fraction.
432. Reduce 3 R. 24 p. 15 yd. to the decimal of an acre.
433. What is the value of .8743 of a year ?
434. Reduce $\frac{4}{7}$ to a decimal fraction.
435. Reduce .5647 to a common fraction.
436. Reduce .27365 of a lb. Troy to lower denominations.
437. What whole numbers=.39542 of a £ ?
438. What decimal fraction=$\frac{4}{11}$?
439. Reduce .03246 of a cord to lower denominations.
440. What common fraction=.526 ?
441. What whole numbers=.05729 of a mile ?
442. Reduce 6 qr. 2 na. 2 in. to the decimal of a yard.
443. What decimal fraction=$\frac{2}{3}\frac{3}{3}$?
444. Reduce 7 cd. ft. 15 cu. ft. 427 in. to the decimal of a cd.
445. What is the value of .4873 of a lb. Apothecaries' weight ?
446. Reduce .1728 to a common fraction.
447. Reduce 19s. 11d. 3 far. to the decimal of a £.
448. Reduce $1\frac{5}{7}$ to a decimal fraction.
449. Reduce 14 cwt. 2 qr. 16 lb. 12 oz. to the decimal of a T.
450. Reduce .4675 of a lb. Troy to whole numbers.
451. Reduce 6 m. 3 w. 4 da. 20 h. 40 m. to the decimal of a yr
452. Reduce $\frac{5}{8}\frac{9}{7}$ to a decimal fraction.
453. Reduce 16 quires of paper to the decimal of a ream.
454. Reduce .95 to a common fraction.
455. Reduce 47 gal. 3 qt. 1 pt. to the decimal of a hogshead.
456. What is the value of .9213 of an acre ?
457. Reduce 227 rd. 12 ft. to the decimal of a mile.
458. Reduce $\frac{1}{2}\frac{8}{9}$ to a decimal fraction.
459. Reduce 18 cwt. 15 lb. 9 oz. to the decimal of a ton.
460. What is the value of .25342 of a £ ?
461. Reduce .5274836 to a common fraction.
462. Reduce $\frac{1}{1}\frac{5}{8}$ to a decimal fraction.
463. Reduce 75 rd. 4 yd. 10 in. to the fraction of a mile.

464. If $6\frac{1}{2}$ yards of cloth cost $\$15\frac{3}{4}$, what cost one yard? What cost $17\frac{1}{2}$ yards?

465. Perform the above example decimally.

466. What cost 46 A. 135 rd. of land at $56.47 per acre?

467. What cost 45 yd. 2 qr. 1 na. of cloth at $4.75 per yd.?

468. What is the value of .7536 cwt. of coffee at $37\frac{3}{4}$ cents per pound?

469. How much wood in a pile $13\frac{3}{4}$ ft. long, $3\frac{3}{4}$ ft. wide, and $5\frac{1}{2}$ ft. high?

470. Perform the above decimally.

471. What will be the cost of 4 cwt. 15 lb. sugar at $15 per cwt.?

472. What is the value of a field containing 87 A. 147 rd. at $35 per acre?

473. How many square feet in the four walls of a room 30.25 ft. long, 25.5 ft. wide, and 18.5 ft. high?

474. Perform the above example by common fractions.

475. How many cubic feet in the above room?

476. How many sq. yd. of paper will cover the walls of the above room?

477. Multiply seven thousand by seven thousandths.

478. From one thousand and five thousandths subtract eight hundred and eight hundredths.

479. What cost $85\frac{5}{8}$ tons of coal at $\$9\frac{3}{5}$ per ton?

480. Perform the above example decimally.

481. At $17.625 a ton, how many tons of hay can be purchased for $95?

482. What cost .1257 cwt. of coffee at 43 cts. per pound?

483. Bought 16 cwt. 40 lb. of coffee at $\$35\frac{1}{2}$ per cwt. What was the cost?

484. What is the value of a pile of wood $18\frac{3}{4}$ ft long, 4 ft. wide, and 6 ft. 4 in. high, at $\$5\frac{2}{3}$ per cord?

485. Perform the above example by decimal fractions.

486. What are the contents of a field $143\frac{1}{2}$ rd. in length and 24.25 rd. in width?

487. Multiply one hundred twenty-five thousandths by ninety-seven hundredths, and prove the answer.

488. Perform the above by common fractions.

489. What is the value of 5 oz. 13 pwt. 16 gr. of gold, at $275 a pound?

490. From one and one thousandth take two ten millionths.

491. How many yards of carpeting .75 yd. wide will cover a floor 15.5 ft. long and 14.25 ft. wide?

492. Perform the above example by common fractions.

493. How many coats can be made from 150 yd. of cloth if 2.3 yd. are required for each coat?

494. What cost $18\frac{3}{4}$ cords of wood at $\$5\frac{3}{5}$ per cord?

495. Perform the above example decimally.

496. What is the value of $\frac{3}{7}$ of a cwt.?

497. What is the value of .3251 of a cwt.?

498. Multiply one hundred eight thousand, and thirteen ten thousandths by one hundred eight thousandths.

499. What is the value of .46235 of a mile?

500. What is the value of $\frac{8}{11}$ of a mile?

501. If $12\frac{3}{5}$ tons of iron cost $948.53, what will $21\frac{1}{3}$ tons cost?

502. What cost 15.375 cords of wood at $8.25 per cord?

503. If 18.375 cords of wood cost $147, what cost one cord?

504. Sold $19\frac{1}{12}$ bushels of apples for $19.12. What should I receive for $5\frac{7}{12}$ bushels?

505. Divide 8753 by 56.14 and multiply the quotient by 48.

506. What are the contents of a floor $18\frac{1}{4}$ ft. long and $16\frac{3}{4}$ ft. wide?

507. Perform the above example by decimals.

508. Multiply forty-eight hundredths by 64 thousandths.

509. Perform the above example by common fractions.

510. Divide seventy-four hundredths by 57 thousandths.

511. Perform the above example by common fractions.

512. Multiply $\frac{138}{184}$ by $\frac{65}{78}$.

513. What is the value of 26 gal. 3 qt. 1 pt. of oil, at $1.15 per gallon?

514. What is the value of 17 cwt. 2 qr. 14 lb. of sugar at $15.125 per cwt.?

515. What is the difference between $15 \div .15$ and $.15 \div 15$?

516. How much cotton at $23\frac{3}{7}$ cents per pound can be purchased for $1784\frac{2}{3}$ lb. of wool at $.66\frac{2}{3}$ cents a pound?

517. If $\frac{4}{7}$ of a pound of butter cost 24 cents, what will $67\frac{5}{6}$ pounds cost?

518. What is the value of $\frac{2}{11}$ of a pound Troy.

519. What is the value of .82573 of a pound Troy?

520. Multiply .19 by .19 and divide the product by 24.

521. Perform the above example by common fractions.

522. Multiply $\frac{3}{4}$ of $\frac{5}{9}$ of 12 by 614.

523. What cost 7280 kegs of nails, each containing 56 lb., at $9\frac{5}{8}$ cents per pound?

524. If 12.375 oz. of gold cost $195, what will be the cost of 1 oz.? What will be the cost of 5 lb.?

525. If one pound of coffee cost 23 cents, what will be the cost of .4627 cwt.?

526. Divide 27 hundredths by 57 hundred.

527. Divide 27 hundred by 57 hundredths.

528. How much cloth at $4.00 per yd. must be given for 6 cwt. 96 lb. of coffee at $24 per cwt.?

529. How many cubic inches in a block of marble 16 ft. long, 8 ft. 6 in. wide, and $5\frac{1}{2}$ ft. thick?

530. A man sold a farm containing 145 A. and 55 rds. at $\$37\frac{1}{2}$ per acre. What did he receive?

531. If $27\frac{3}{4}$ oz. of wool make $8\frac{5}{8}$ yd. of cloth, how much cloth can be made from 1 oz. of wool?

532. How much sugar at $13\frac{5}{8}$ cents a pound must be given for 18 gal. 1 qt. 1 pt. of molasses at 65 cents per gallon?

533. How many square yards in the walls of a room 14.25 ft. long, 12 ft. wide, and 10.25 ft. high?

534. How many cubic yards in the above room?

535. A farmer had $\frac{1}{4}$ of his sheep in one pasture, $\frac{1}{3}$ in another, $\frac{1}{5}$ in another, and the remainder, 26, in a fourth. How many sheep had he?

536. What cost .5231 of an acre of land at $2.455 per rod?

537. What cost $\frac{6}{7}$ of an acre of land at $5.75 per rod?

538. Bought $\frac{2}{3}$ of a ton of coal for $11\frac{1}{2}$. What was the value of $\frac{3}{4}$ of a ton at the same rate?

539. A piece of land 5 rd. square is worth $100. What is 5 square rods of it worth?

540. A piece of cloth containing 2 square yards was sold for $5. What would be the price of another piece 3 yards square at the same rate?

541. If .355 of a cord of wood cost $2.50, what is the price per cord?

542. Bought 3 cwt. 95 lb. of sugar at $12\frac{2}{3}$ per cwt., and paid for it with wood at $5\frac{1}{2}$ a cord. How many cords did it take to pay for it?

543. How much would it cost to carpet a floor 18 ft. 6 in. long and 14 ft. 3 in. wide at $1.66\frac{2}{3}$ per yard?

544. How many apples at $1.87\frac{1}{2}$ a bushel must be given in exchange for $12\frac{2}{5}$ yd. of cloth at $58\frac{1}{2}$ cts. per yard?

545. At £1 6s. 4d. per yd., what will be the price of $9\frac{5}{8}$ yds. of broadcloth?

546. How many cords of wood in a pile 40 ft. 6 in. long, 7 ft. high, and 4 ft. 3 in. wide?

547. What would $5\frac{3}{4}$ bales of cotton cost, each bale weighing 5.125 cwt., at $15.75 per cwt.?

548. $8576\frac{1}{2}$ is $\frac{7}{8}$ of what number? $\frac{28}{32}$ of what number?

549. 463.042 is $\frac{5}{6}$ of what number? $\frac{20}{24}$ of what number?

550. 947 is $\frac{13}{15}$ of what number? $\frac{26}{30}$ of what number?

551. .04763 is $\frac{5}{12}$ of what number? $\frac{10}{24}$ of what number?

552. Divide 420 by .25 and multiply the quotient by .75.

553. Divide 420 by $\frac{1}{4}$ and multiply the quotient by $\frac{3}{4}$.

554. Reduce $\frac{12}{16}$ of $\frac{4}{24}$ to a decimal fraction.

555. Reduce .25 × .85 to a common fraction.

556. How many cubic feet in a room 12.3 long, 10 ft. 6 in. wide, and 10 ft. high?

557. How many square yards of paper will cover the walls of the above room?

558. 750 is .6 of what number?

559. Add 47 ten thousandths, 15 hundredths, 8 tenths, 492 millionths, 130 ten thousandths, and 5678 ten millionths.

560. Gave \$85.50 for $11\frac{3}{4}$ tons of coal. What should I give for $21\frac{2}{5}$ tons?

561. If a piece of land 5 rods square cost \$62.50, what will 40 square rods cost?

562. What common fraction is equal to .875?

563. What decimal is equal to $\frac{7}{8}\frac{5}{7}\frac{5}{5}$?

564. If $13\frac{3}{8}$ bushels of wheat cost \$16.50, what should be paid for $18\frac{2}{3}$ busbels?

565. Bought a box of sugar containing 475 lbs. for \$30. Sold $\frac{1}{3}$ of it at 8 cents per lb., and the remainder at $12\frac{1}{2}$ cents per lb. How much did I make by the bargain?

566. Reduce .478 of a lb. Troy to lower denominations.

567. Reduce $\frac{5}{1}\frac{9}{2}\frac{9}{5}$ of a lb. Troy to lower denominations.

568. 240 is .12 of what number?

569. What are the contents of a pile of wood 22 ft. 9 in. long, 3 ft. 9 in. wide, and 6 ft. 3 in. high?

570. Add 75 ten millionths, 42 ten thousandths, .37, .427, 57.3004, and 44 thousandths.

571. If $\frac{3}{5}$ of a ship and cargo are valued at \$7854, what is $\frac{8}{1}\frac{8}{1}$ of it worth?

572. If 4.75 yards of cloth cost \$15.625, what will 17.375 yards cost?

573. When £42 15s. 6d. are paid for $\frac{5}{8}$ of a bale of cloth, what sum should be paid for the remainder?

574. What cost 25 yd. 2 qr. 3 na. of cloth at \$4.25 per yd.?

575. If $18\frac{3}{4}$ bushels of apples cost \$35.75, what will 15.15 bushels cost?

576. Bought a lot of land $7\frac{3}{11}$ rods square for \$5 per square rod, and sold it for 5 cts. per sq. ft. How much was gained?

577. Reduce .375 to a common fraction.

578. Reduce $\frac{4}{5}\frac{4}{7}\frac{4}{6}$ to a decimal fraction.

579. Add 476 thousandths, 527 millionths, 45 hundredths, 8 tenths, 75 ten thousandths, and 613 hundred thousandths.

580. Reduce $\frac{45\frac{4}{7}}{76\frac{5}{8}}$ to a simple fraction, then to a decimal.

581. Reduce .5357 to a common fraction.

582. What decimal part of a mile is 875 feet?

583. How many bushels of wheat at $\$1\frac{1}{8}$ per bushel must be exchanged for 45 gal. 3 qt. of molasses at \$50 per hogshead?

584. If I own $\frac{7}{15}$ of a ship and sell $\frac{2}{3}$ of my share, what part of the ship do I sell?

585. $17\frac{1}{2} \div 15\frac{7}{8} \times 6\frac{3}{4} =$ what?

586. How many suits of clothes can be made from 47 yards of cloth, allowing 6.75 yards for each suit?

587. What decimal fraction is equal to $\frac{5}{16}$?

588. What common fraction is equal to .3125?

589. If $\frac{3}{4}$ of $\frac{1}{2}$ of a ton of coal is worth $\$3\frac{6}{7}$, what is a ton worth?

590. Reduce $\frac{5}{11}$ of a ton to lower denominations.

591. Reduce .1357 of a yard to lower denominations.

592. A grocer bought 8 cwt. 30 lb. of sugar for \$88, and sold it for 12 cents a pound. How much did he gain by the bargain?

593. $\frac{3}{7}$ of $482\frac{1}{2}$ are how many times $5\frac{1}{2}$?

594. $927 \div .45$ are how many times 48?

595. A school-room is 30 ft. square and 20 ft. high. How many square yards in the walls?

596. How many cubic feet in the above room?

597. Bought 75 yards of cloth at \$3.50 per yard, and sold $\frac{3}{4}$ of it for \$6 per yard, and the remainder at \$7 per yard. How much did I make by the bargain?

598. If .875 cd. of wood cost \$5.50, what cost 1 cord?

599. If $\frac{3}{5}$ of a cargo of wheat cost \$12,360, what sum will pay for the whole cargo?

600. What is the difference between $.75 \div 75$ and $75 \div .75$?

601. What is the value of $\frac{6}{11}$ of a year?

602. What is the value of .897 of a year?

603. If $\frac{2}{3}$ of 12 tons of coal cost \$85, how much will $\frac{2}{5}$ of 30 tons cost?

604. Dividend 472, divisor 15748, what is the quotient?

605. $(156 \times 25 \div 13 - 175) \times 2 \div .15 =$ what?

606. How many yards of carpeting will cover a floor $16\frac{2}{3}$ ft. long and $14\frac{3}{4}$ ft. wide?

607. How many yards of carpeting will cover a floor 15.75 ft. long and 14.5 ft. wide?

608. Divide 579 by 84764 and prove the answer.

609. In a school, $\frac{1}{4}$ of the pupils study grammar, $\frac{1}{5}$ arithmetic, $\frac{1}{3}$ geography, and the remainder, 39, write. How many pupils in the school?

610. What cost $18\frac{5}{6}$ cords of wood at \$8.755 per cord?

611. What are the contents of a board 24 ft. 6 in. long and 1 ft. 3 in. wide?

612. From 4 acres of land I sold one piece 20 rods square and another piece containing 20 square rods. How much remained?

613. Reduce .75 and .25 to common fractions and divide the last by the first?

614. How many square rods in a field $215\frac{1}{8}$ rods long and $124\frac{3}{4}$ rods wide?

615. How many acres in a field 215.125 rods long and 124.75 rods wide?

616. Reduce $\frac{4}{7}$ of a £ to lower denominations.

617. Reduce .4763 of a £ to lower denominations.

618. If $\frac{5}{7}$ of a cord of wood cost \$7.50, what will a cord cost?

619. If $\frac{7}{8}$ of a farm cost \$5000, what will $\frac{5}{12}$ cost?

620. If $\frac{1}{2}$ of $\frac{5}{8}$ of a ship costs \$12,000, what will $\frac{3}{4}$ of the remainder cost?

621. Subtract four hundred and twenty-five ten-thousandths from ten thousand, and multiply by .12.

622. If the tax on \$9000 is \$180, what will be the tax on one dollar? What will be the tax on \$4725?

623. A man left $\frac{2}{5}$ of his estate to his oldest son, $\frac{1}{3}$ to his youngest son, and the remainder, \$2400, to his daughter. What was the value of the estate?

624. Find the greatest common divisor of 214 and 196.

625. Find the least common multiple of 9, 18, 27, and 72.

626. Reduce $\frac{72}{288}$, $\frac{12}{78}$, $\frac{43}{301}$, and $\frac{46}{94}$ to their lowest terms.

627. Reduce $\frac{5764}{15}$, $\frac{948}{12}$, and $\frac{86247}{23}$ to mixed numbers.

628. Reduce $196\frac{3}{8}$, $475\frac{6}{7}$, and $4791\frac{9}{12}$ to improper fractions.

629. Reduce $\frac{5}{6}$, $\frac{4}{7}$, $\frac{3}{8}$, $\frac{9}{12}$, $\frac{7}{8}$, $\frac{18}{24}$, and $\frac{12}{48}$ to decimals.

630. Reduce $\frac{2}{3}$ of $\frac{7}{8}$ of $\frac{4}{7}$ of $\frac{9}{10}$ of $\frac{6}{11}$ to a simple fraction.

631. Add $\frac{7}{12}$ and $\frac{9}{15}$, and subtract $\frac{3}{7}$ from this sum.

632. Multiply $\frac{8}{12}$ by $\frac{4}{7}$, and subtract $\frac{2}{13}$ from the product.

633. Divide $\frac{15}{18}$ by $\frac{3}{8}$, and multiply the quotient by $\frac{12}{15}$.

634. Reduce $\frac{3}{7}$ of a pound, Apothecaries' weight, to lower denominations.

635. Reduce .65753 of a year to lower denominations.

636. Divide 8753 by 5648763 and prove the answer.

637. A person, after spending $\frac{1}{2}$ and $\frac{1}{4}$ of his money, had \$40 left. How much had he at first?

638. How many cubic feet in a wall $18\frac{3}{4}$ ft. long, 2 ft. 6 in. thick, and 4.25 ft. high? How many yards?

639. Reduce $\frac{15}{16}$, $\frac{4}{9}$, $\frac{8}{15}$, and $\frac{12}{18}$ to decimal fractions.

640. What is the value of an estate if $\frac{1}{2}$ of $\frac{3}{8}$ of it is worth \$64?

641. In a certain school there are 420 pupils, and there are twice as many girls as boys. How many are there of each?

642. How many square ft. of glass in 4 windows of 12 panes each, each pane being 2 ft. 6 in. long and 1 ft. 3 in. wide?

CHAPTER III.

PERCENTAGE, WITH PRACTICAL APPLICATION TO INTEREST, DISCOUNT, STOCKS, COMMISSION, &c., PROPORTION, PARTNERSHIP, SQUARE AND CUBE ROOTS.

1. What is 6 per ct. of $27.50? of $15.25? of $38.40?
2. What is 3% of 1200? of 50? of 1600? of 498?
3. What is $5\frac{1}{2}$ per ct. of 90? of 100? of 150? of 1800?
4. Find $6\frac{3}{4}\%$ of $8.50? $850, $12.75, $1275.
5. Find $7\frac{3}{10}$ per ct. of $200, of $500, of $1000.
6. What is $8\frac{1}{4}$ per ct. of 490 lb.? of 650 lb.? of 47.25 lb.?
7. Write decimally 6%, 15%, $12\frac{1}{2}\%$, $33\frac{1}{3}\%$.
8. What is $87\frac{1}{2}\%$ of 832? of 1200? of 491.50?
9. Write decimally $\frac{7}{8}\%$, $2\frac{1}{2}\%$, $15\frac{3}{4}\%$.
10. Write decimally $75\frac{1}{3}\%$, $125\frac{1}{2}\%$, $\frac{1}{8}\%$.
11. What is 5% of 728? $7\frac{1}{2}\%$ of 648? $8\frac{1}{4}\%$ of $500.
12. 275 is 5% of what number? 19% of what number?
13. 60 is what % of 240? of 720?
14. Write 9% decimally, $8\frac{1}{2}\%$, $5\frac{3}{4}\%$, $7\frac{3}{10}\%$.
15. What is 20% of $150? of 160 lb.? of 400 bushels?
16. 90 is what % of 450? of 720? of 585?
17. 75 is 6% of what number? 9% of what?
18. Write 12% decimally, $12\frac{1}{2}\%$, $15\frac{3}{4}\%$.
19. 50 is what % of 300? of 200? of 500? of 325?
20. How many bushels are $42\frac{5}{8}\%$ of 800 bushels?
21. Find 12% of 4792 miles, $12\frac{1}{2}\%$ of 875 dollars.
22. What per cent of $125 is $25? $30? $40?
23. $40 is what per cent of $80? of $120? of $150?
24. Write decimally 7%, 87%, $87\frac{1}{2}\%$, $87\frac{3}{4}\%$.
25. What is 18% of 1500 pounds? of 473 tons?
26. $15 is 6 per ct. of how many dollars? 3%? 5%? 10%?
27. What is $9\frac{1}{3}\%$ of 48? $11\frac{1}{2}\%$? $12\frac{1}{2}\%$? $27\frac{1}{2}\%$?

Required the

28. Amount of $712.24 from March 3, 1868, to July 11, 1870.
29. Interest of $430.87 from May 4, 1869, to April 9, 1872.
30. Rate at which $800 will gain $40 in 10 months.
31. Principal that will gain $37.50 in 4 years 2 months.
32. Amount of $2000 from Feb. 17, 1868, to Dec. 30, 1872.
33. Time in which $360 will gain $75.
34. Interest of $600.50 from May 7, 1871, to Oct. 9, 1873.
35. Amount of $397.15 from March 22, 1870, to Jan. 4, 1871.
36. Interest of $500 from June 12, 1865, to Aug. 14, 1872.
37. Rate at which $1500 will gain $187.50 in 2 years 1 month.
38. Principal that will gain $384 interest in 4 yr. 3 mo. 6 d.
39. Amount of $0.98 from April 4, 1864, to Feb. 10, 1873.
40. Interest of $10.36 from Aug. 20, 1870, to Feb. 1, 1871.
41. Time in which $130 will gain $5.20 interest.
42. Amount of $358 from March 7, 1867, to Nov. 12, 1870.
43. Rate at which $1000 will gain $150 in 2 years 6 months.
44. Interest of $965.18 from Jan. 29, 1868, to Sept. 9, 1873.
45. Interest of $847.15 from April 23, 1868, to Oct. 12, 1874.
46. Amount of $85.13 from Sept. 9, 1869, to March 27, 1874.
47. Principal that will yield $12.64 in 1 year.
48. Interest of $987.41 from Jan. 6, 1869, to Nov. 10, 1875.
49. Amount of $820.13 from Aug. 12, 1871, to Dec. 19, 1873.
50. Interest of $9812.15 from Sept. 13, 1870, to Aug. 15, 1873.
51. Time in which $900 will gain $72 interest.
52. Amount of $5762.64 from March 10, 1873, to Sept. 1, 1873.
53. Rate at which $750 will amount to $817.50 in 1 year.
54. Interest of $84.75 from April 9, 1870, to Jan. 1, 1874.
55. Amount of $198.76 from May 15, 1864, to Nov. 12, 1870.
56. Principal that will gain $200 in 4 years 6 months.
57. Interest of $1591.03 from Feb. 6, 1872, to Dec. 10, 1873.
58. Rate at which $500 will gain $100 in 2 years 6 months.
59. Interest of $470.87 from Nov. 17, 1870, to Dec. 28, 1873
60. Amount of $58.40 from Aug. 19, 1843, to March 17, 1871.
61. Interest of $2.35 from July 15, 1865, to Feb. 13, 1874.
62. Amount of $0.75 from June 6, 1860, to May 12, 1871.
63. Amount of £95 15s. 6d. for 2 years 6 months 12 days.

Perform the above examples at 5%, 7%, 8½%, 7$\frac{3}{10}$%, 12%.

64. A note for $500, dated July 4, 1849, has the following indorsements: Sept. 5, 1849, $97.25. June 3, 1850, $14.75. Aug. 1, 1850, $217. What is due Jan. 1, 1853?

65. On a note for $2340.24, dated March 9, 1870, the following payments were made: April 4, 1871, $674.19. Sept. 12, 1872, $41.17. Jan. 10, 1873, $73.45. June 25, 1874, $1500. How much is due Feb. 14, 1875?

66. A note for $2000, dated June 1, 1865, has the following indorsements: Aug. 4, 1865, $75. Dec. 15, 1865, $125.75. Feb. 24, 1871, $250. What is due April 10, 1871?

67. A note for $248.47, dated Oct. 14, 1860, was indorsed as follows: Received, Jan. 2, 1865, $32.62. Jan. 4, 1866, $50. March 15, 1869, $60. What remains due April 10, 1870?

68. A note for $525 is dated July 13, 1869. Indorsements: Aug. 10, 1871, $50. Nov. 18, 1872, $150. July 13, 1873, $10. Sept. 12, 1873, $100. Required the balance due March 12, 1874.

69. A note for $1000, dated March 4, 1866, has the following indorsements: Dec. 1, 1866, $75. Dec. 11, 1868, $246. Jan. 3, 1869, $150. May 3, 1869, $50. What was due Jan. 3, 1870?

70. On a note for $752.27, dated August 5, 1871, the following payments were made: March 10, 1872, $200. May 15, 1873, $23.40. Sept. 12, 1873, $175.60. Dec. 9, 1874, $95.30. How much is due June 30, 1875?

71. A note for $1735 is dated Feb. 19, 1870. Indorsements: June 29, 1871, $1000. Nov. 14, 1871, $500. Nov. 14, 1872, $5.67. What is due Dec. 24, 1872?

72. A note for $75.87, dated Nov. 1, 1868, was indorsed as follows: Received April 5, 1869, $10. May 20, 1871, $3.10. Sept. 4, 1871, $5.92. Jan. 1, 1872, $40. Required the balance due Oct. 7, 1872.

73. On a note for $800, dated May 17, 1864, the following payments were made: Feb. 20, 1867, $114.32. Aug. 8, 1867, $35. May 16, 1868, $425.43. Oct. 4, 1868, $12. What was due Sept. 1, 1870?

74. A note for $450.61, dated Sept. 9, 1869, had the following indorsements: May 15, 1870, $78.28. August 6, 1871, $243.27. Feb. 9, 1873, $35.50. What was due Sept. 4, 1873?

75. A note of $447.13, dated Dec. 25, 1865, has the following indorsements: June 14, 1868, $145.25. Sept. 1, 1868, $60 Required the amount due April 15, 1869.

76. A note for $991, dated April 1, 1866, had the following indorsements: Feb. 1, 1867, $70. July 4, 1867, $40. June 1, 1870, $200. Required the amount due July 1, 1871.

77. A note for $5000 is dated Jan. 1, 1867. Indorsements: March 1, 1868, $900. Sept. 1, 1868, $1200. July 4, 1869, $2000. What was due Jan. 1, 1870?

78. A note for $1200 is dated Dec. 25, 1866. Indorsements: April 10, 1867, $400. Sept. 20, 1867, $10. Nov. 15, 1867, $300. March 1, 1868, $20. Aug. 10, 1869, $150. Required the amount due Dec. 25, 1870.

79. PORTLAND, Feb. 13, 1870.

On demand I promise to pay George Williams two hundred dollars, with interest, value received. GEORGE CURTIS.

Indorsements: May 10, 1870, $12.75. Aug. 15, 1870, $9. Sept. 18, 1870, $15. April 4, 1871, $100. What remains due Jan. 1, 1872?

80. BOSTON, Oct. 7, 1869.

For value received, we jointly and severally promise to pay John Brown or order, $327 on demand, with interest.

HENRY CURTIS.
SAMUEL HERSEY.

On this note were the following indorsements: Jan. 9, 1870, $10. June 6, 1870, $90. March 4, 1871, $7. Sept. 10, 1871, $120. What remained due Feb. 13, 1872?

81. NEW YORK, Sept. 1, 1868.

For value received, we promise to pay James Smith or order, on demand, $490, with interest.

WILLIAM ROBERTS.
CHARLES WILLIAMS.

Indorsements: March 1, 1869, $125. Nov. 12, 1870, $25. April 16, 1871, $200. Dec. 5, 1871, $50. What remained due March 12, 1872?

82. A note of $700 was dated Jan. 1, 1865. Indorsed July 1, 1865, $200. Jan. 1, 1866, $300. What was due July 1, 1866?

83. A note for $500 was dated Jan. 1, 1865. Indorsements: March 10, 1866, $20. Aug. 1, 1866, $135.59. Dec. 12, 1866, $20. May 5, 1867, $200. What was the balance due July 8, 1868?

84. A note for $850 was dated May 1, 1870, and indorsed: June 1, 1871, $150. Sept. 15, 1871, $12. Jan. 1, 1872, $215. July 16, 1872, $10. Nov. 1, 1872, $125. What remained due Sept. 1, 1873?

85. A note for $2400 was dated Oct. 1, 1870. Indorsed April 1, 1871, $200. Dec. 16, 1871, $300. April 1, 1872, $900. Required the amount due July 21, 1873.

86. A note for $600 was dated March 1, 1865. Indorsed May 1, 1866, $200. June 16, 1867, $80. March 1, 1869, $127. Required the amount due Oct. 16, 1870.

87. A note for $287 was dated Jan. 1, 1870. Indorsed May 1, 1870, $20. Feb. 10, 1871, $15. Sept. 30, 1871, $30. What was the balance due Dec. 31, 1871?

88. A note for $1000 was dated May 1, 1871. Indorsed Oct. 30, 1871, $75. July 10, 1872, $25. Dec. 19, 1872, $250. Required the balance due May 1, 1873.

89. A note for $240.48 was dated July 8, 1868. Indorsed Nov. 17, 1868, $35.79. April 20, 1869, $40. Nov. 10, 1869, $36.75. Feb. 12, 1870, $18.25. What was the amount due April 1, 1870?

90. A note for $157.87 was dated May 1, 1869. Indorsed Dec. 10, 1869, $10.30. Nov. 10, 1870, $15.25. July 1, 1871, $45. What was the balance due Sept. 30, 1871?

91. A note for $3800 was dated May 8, 1871. Indorsed Dec. 1, 1871, $120. March 6, 1872, $500. Nov. 19, 1872, $75. Required the balance due Dec. 30, 1872.

92. A note for $520.50, dated Sept. 12, 1869, had the following indorsements: May 5, 1870, $18. Sept. 20, 1870, $300. What was due August 9, 1871?

Required the

93. Present worth of $1200, due in 4 years 6 months.

94. Discount of $600, due in 2 years 4 months, at 8%.

95. Bank discount of a note for $350, due in 9 months.

96. Avails of a note for $500, due in 3 months, discounted at a bank, the rate of discount being 7%.

97. Present worth of $75.50, due in 1 year 8 months.

98. Amount for which a note, due in 4 months, must be given, that the avails may be $500.

99. Discount of $90.12, due in 1 year 9 months, at 8½%.

100. Present worth of $390, due in 3 years 8 months.

101. Avails of a note for $450, due in 6 months, discounted at a bank, the rate of discount being 8%.

102. Bank discount of $250 for 4 months 15 days, at 9%.

103. Discount of $76.15 for 2 years 3 months 15 days.

104. Amount for which a note, due in 90 days, must be given, that the proceeds may be $375.25.

105. Present worth of $515.40 for 2 years 20 days.

106. Bank discount of $120.50 for 5 months 15 days, at 7%.

107. Avails of a note for $540, due in 2 months, discounted at a bank, at 6%.

108. Discount of $492.12 for 4 years 6 months 10 days.

109. Present worth of $800, due in 3 years 25 days, at 8%.

110. Discount of $578.25, due in 1 month 15 days.

111. Bank discount of a note for $400, due in 8 months.

112. Avails of a note for $175, due in 4 months, discounted at a bank, the rate of discount being 9%.

113. Bank discount of a note for $1275 for 6 mos. 20 days.

114. Amount for which a note, due in 120 days, must be given, that the proceeds may be $7500.

115. Present worth of a note for $1800, due in 2 yrs. 11 mos.

116. Bank discount for $10 for 5 months 1 day, at 10%.

117. Proceeds of a note for $629, due in 3 months, discounted at a bank, the rate being 8%.

118. Present value of a note for $200, due in 28 days.

119. What are the net proceeds from the sale of 3745 barrels of flour at $10.50 per barrel, commission being $3\frac{1}{4}\%$?

120. A factor received $2460.76 for the purchase of flour after deducting his commission of $2\frac{3}{4}\%$. What will be the amount invested?

121. What sum shall I receive for negotiating a loan of 7500, at $\frac{3}{4}\%$ commission?

122. An agent collects for a society 278 bills of $7.63 each. How much must he pay over if he receives 4% for collecting?

123. What is the value of 27 shares of bank stock at a discount of $12\frac{3}{4}\%$, par value being $100 per share?

124. What are the net proceeds from the sale of 525 bales of cotton at $120 per bale, after deducting $2\frac{1}{4}\%$ commission?

125. A broker receives $1752.44 to invest in real estate, after deducting his commission of $1\frac{3}{8}\%$. What will be the amount invested?

126. What are the net proceeds of a consignment, sold for $2850, on which there are charges of $235 cartage, $250 storage, and $3\frac{1}{4}\%$ commission?

127. Sold 426 bales of cotton, weighing 408 pounds each, at 26 cents a pound. What is the commission at $2\frac{3}{4}\%$?

128. A broker receives $2195.50 to invest in U. S. bonds, after deducting his commission of $\frac{7}{8}\%$. What will be the amount invested?

129. Sold my house for $5500. What sum shall I receive from the broker if I pay him $2\frac{1}{2}\%$ for selling?

130. How many barrels of flour at $10.25 each can a factor purchase with a remittance of $2375.90, after deducting $2\frac{1}{2}\%$ commission?

131. What is the value of a draft on New York for $1532.45, at $\frac{3}{8}\%$ discount?

132. What is the commission for selling goods amounting to $1758.34, at $2\frac{3}{4}\%$?

133. An agent received $14635.70 to expend for cotton, deducting his commission at $2\frac{1}{2}\%$. What value of cotton can he purchase?

134. How much stock, at $6\frac{3}{4}\%$ discount, can be bought for $9650.53?

135. How much money, at 5% discount, will pay a note for $1850?

136. What will be the amount of a bill of goods to be purchased with the balance of $7548.15, after deducting 3% commission?

137. An agent purchased wheat for a flouring mill amounting to $5247.44. What was his commission at $2\frac{1}{2}\%$?

138. An agent receives $1500 for the purchase of wheat, after deducting $2\frac{3}{4}\%$ commission. What will be the amount of his commission?

139. A merchant paid a broker $2600 for a quantity of wheat, and his commission at 3%. What did he pay for the wheat alone?

140. What is a draft for 1728.50 worth at $\frac{5}{8}\%$ premium?

141. What is the commission, at 2%, for the purchase of 1195 pounds of wool at 34 cents a pound?

142. If the interest on a note at $7\frac{1}{2}\%$ is $348.72, what would it be at $8\frac{3}{4}\%$?

143. How many yards of cloth can be bought for $582.18, if 174 yards cost $695.53?

144. If 1085 bushels of corn will grow on 32 acres of land, how much can be produced on 124 acres?

145. If a ship sail 2694 miles in 28 days, how far will she sail in 7 weeks?

146. If $1200 will support a garrison 45 days, how long will $855.42 support it?

147. If a pasture will feed 125 horses 87 days, how many horses will it feed 58 days?

148. How many pounds of sugar can be purchased for $1750, if 247 pounds cost $38.50?

149. If a quantity of provisions will last a regiment of 965 soldiers 47 days, how many men will it feed 38 days?

150. How many yards of cambric $\frac{7}{8}$ yard wide, will it take to line 127 yards of cloth $1\frac{3}{4}$ yards wide?

151. If 160 pounds of tea cost $155, how much can be purchased for $243.12?

152. What cost 250 tons of coal, if 32 tons cost $297.50?

153. If 2850 bushels of wheat make 570 barrels of flour, how many barrels of flour can be made from 983 bushels of wheat?

154. If a man can earn $1200 in 304 days, how much will he earn in 448 days?

155. If an engine run 1750 miles in 85 hours, how far will it run in 53 hours?

156. How many gallons of molasses can be purchased for $1350.40, if 10 hhds., each containing 124 gals., cost $875?

157. If 68 men cut 411 cords of wood, how many will be required to cut 1430 cords?

158. How many acres of land can be purchased for $1500, if 824 acres cost $12360?

159. If 450 bushels of oats will last 40 horses 75 days, how many days will 2000 bushels last them?

160. If 20 men perform a piece of work in 35 days, how many men will be required to perform the same in 52 days?

161. If 5 cwt. 45 lbs. of sugar cost $82.50, how much sugar can be purchased for $195.40?

162. If the freight of 118 tons is $340, what would be the freight of 49 tons 3 cwt. for the same distance?

163. If 240 men can build a wall in 47 days, how many men would build it in 68 days?

164. If a family of 9 persons spend $1100 in a year, how many dollars will be required for a family of 7 persons?

165. If 18 tons of coal cost $216, how many tons may be bought for $180?

166. What cost 93 cords of wood, if 57 cords cost $600?

167. If $\frac{5}{9}$ of an acre of land is worth $42.50, what is the value of $24\frac{3}{7}$ acres at the same price?

168. If a man perform a journey in 45 days when the days are 12 hours long, in how many days of 14 hours each will he perform the same?

169. Cost, \$150; profit, 15%. What is the selling price?
170. Selling price, \$125; loss, 20%. What is the cost?
171. Profit, \$30; cost, \$128.50. Required the gain %.
172. Loss, 10%; cost, \$12.50. Required the selling price.
173. Selling price, \$125.50; loss, 20%. Required the cost.
174. Cost, \$12; selling price, \$16. Required the gain %.
175. Profit, 25%; cost, \$5.50. Required the selling price.
176. Selling price, \$65.50; profit, 12%. What is the cost?
177. Loss, $12\frac{1}{2}$%; cost, \$59. What is the selling price?
178. Cost, \$7.50; profit, 18%. Required the selling price.
179. Cost, \$175.20; selling price, \$200. Required the gain %.
180. Selling price, \$280.30; cost, \$300. What is the loss %?
181. Cost, \$1500; gain, $16\frac{2}{3}$%. Required the selling price.
182. Selling price, \$18.50; loss, $6\frac{1}{4}$%. Required the cost.
183. Cost, \$4.50; selling price, \$6. What is the gain %?
184. Profit, \$35; cost, \$80. Required the gain %.
185. Cost, \$95; profit, $12\frac{1}{2}$%. What is the selling price?
186. Loss, \$25.50; cost, \$175. Required the loss %.
187. Selling price, \$125.50; profit, $8\frac{1}{3}$%. What is the cost?
188. Selling price, \$1875; loss, 15%. What is the cost?
189. Cost, \$88.60; loss, $7\frac{1}{2}$%. What is the selling price?
190. Profit, \$15; cost \$160. Required the gain %.
191. Selling price, \$75.25; cost, \$50. What is the gain %?
192. Loss 25%; selling price, \$90. Required the cost.
193. Cost, \$5; selling price, \$7.50. What is the gain %?
194. Profit, \$12%; selling price, \$45. What is the cost?
195. Selling price, \$500; gain, $33\frac{1}{3}$%. What is the cost?
196. Cost, \$13.50; selling price, \$10. Required the loss %?
197. Profit, $6\frac{1}{4}$%; cost, 10 cts. What is the selling price?
198. Selling price, \$250; cost, \$190. Required the gain %.
199. Cost, 10 cts.; selling price, 12 cts. Required the gain %.
200. Profit, \$35; selling price, \$95. Required the gain %.
201. Selling price, 12 cts.; cost, 15 cts. Required the loss %
202. Profit, \$42; selling price, \$65. Required the gain %.
203. Cost, \$45.20; gain, 13%. Required the selling price.
204. Loss, 15%; cost, \$30. What is the selling price?
205. Selling price, \$1100; gain, 14%. Required the cost.
206. Cost, \$90; gain, 12%. Required the selling price.

207. A merchant having $2756 in the Canal Bank wishes to withdraw 15%. How much will remain?

208. What is the amount of $450.75 for 4 years 7 months 15 days, at 9%.

209. If $\frac{3}{4}$ of a ship is valued at $5500, what is $\frac{7}{8}$ of her worth at the same rate?

210. What is the premium for the insurance of a house valued at $6700, for 1 year, at $\frac{7}{8}$%?

211. A owes B $300, to be paid in 4 months, $500 in 6 months, $200 in 8 months, and $400 in 10 months. What is the equated time for the payment of the whole sum?

212. If I sell 300 bales of cotton, each weighing 540 pounds, at 28 cts. per pound, and receive $2\frac{1}{2}$% commission, how much do I make by the transaction?

213. What is the duty on 120 hogsheads of molasses, each hogshead gauging 138 gallons, the cost of the molasses being 38 cts. per gallon; duty 25%?

214. What must be paid for 20 shares railroad stock at $12\frac{1}{2}$% advance, par value being $100 per share?

215. How long must $240 be on interest at $8\frac{1}{2}$% to gain $26.40?

216. The avails of a note having 3 months to run, discounted at a bank, were $1240.95. What was the face of the note?

217. If 20 men build a wall 45 ft. long, 8 ft. high, and 4 ft. thick, in 16 days of 9 hours, how many days of 8 hours will 60 men require to build a wall 85 ft. long, 9 ft. high, and 3 ft. thick?

218. What is the amount of $425.45 for 3 years 6 months, at compound interest?

219. A, B, and C engaged in trade. A put in $400, B put in $250, and C put in $600. They gained $300. What is each man's share of the gain?

220. A horse which cost me $250 I sold for $300 on 6 months' credit. How much did I gain?

221. If 480 bushels of oats will last 24 horses 18 days, how long will 640 bushels last 42 horses?

222. What must be the face of a note at 60 days, the proceeds of which, when discounted at a bank, are $488?

223. If $800 gain $32 in 8 mos., what is the rate of interest?

224. A town is taxed $12,000 on its property valued at $2,400,000. What is the tax on one dollar?

225. What is the duty, at 20%, on 240 bales of wool, each weighing 400 pounds, at 28 cts. per pound; tare 4%?

226. A merchant sold goods amounting to $480 and gained $16\frac{2}{3}\%$. What was the cost of the goods?

227. What is the value of 12 shares in the Merchants' Bank at 12% premium?

228. Bought a horse and carriage for $650, and sold them for $800. What did I gain per cent.?

229. Bought 175 bushels of wheat for $325, and sold it for $2 per bushel. What per cent. was the gain?

230. A commission merchant received $3312.25 for the purchase of goods, after deducting 3% commission. What amount will he invest?

231. If I buy 24 shares of bank stock at par and sell it at $7\frac{1}{2}\%$ premium, how much do I gain?

232. How many 500 dollar U. S. bonds can be bought for $6630, at $10\frac{1}{2}\%$ premium?

233. How much will eight 500 dollar 7-30 bonds cost at $6\frac{1}{2}\%$ premium?

234. What is the commercial discount on a bill of goods amounting to $1250, sold on 4 months' time, at 5% off for cash?

235. What is the difference between four thousand, and seven thousandths?

236. If 7 cwt. 41 lb. of coffee cost $247.35, how much can be purchased for $324.85?

237. A merchant shipped a cargo amounting to $1645, and paid $2\frac{3}{4}\%$ for insurance. What was the whole cost?

238. If I pay $1275 for an invoice of flour, for what must I sell it to gain $16\frac{2}{3}\%$?

239. What is the present worth of a note for $259, due in 1 month, at $7\frac{1}{2}\%$ bank discount?

240. Bought 50 bales of wool, each weighing 380 pounds, at 30 cts. a pound; tare, 5%. If I sell the lot for $6000, what % shall I gain?

241. When gold is worth 136, what is one dollar in currency worth?

242. What is the difference between the discount and interest of $300 for 2 years 6 months, at 8%?

243. A broker received $1212 for the purchase of bank stock, after deducting 1% commission. How many $100 shares did he buy?

244. A merchant having lost 20% of his capital had $2000 left. How much had he at first?

245. A man owes $2400, $\frac{1}{3}$ of which is now due, $\frac{1}{4}$ of it in 3 mo., $\frac{1}{6}$ of it in 4 mo., and the remainder in 6 mo. What is the equated time of payment?

246. Divide four hundred and sixty-eight millionths by thirteen thousandths, and multiply the quotient by four ten-thousandths.

247. What would be the duty, at 25%, on 75 pieces of cloth, each piece being 32 yards in length, valued at 23 cts. per yd.?

248. At $10 a cord, what cost a pile of wood 18 ft. 6 in. long, 4 ft. 3 in. wide, and 7 ft. 9 in. high?

249. Multiply twelve-thousandths by fifteen hundred, and divide the product by five-tenths.

250. When gold is 135, what is the value of $400 in currency?

251. How many cubic feet of wood in a shed $24\frac{1}{2}$ feet long, $16\frac{1}{2}$ feet wide, and $10\frac{1}{4}$ feet high?

252. What would be the cost of the above at $5.50 per cd.?

253. Divide five thousand by five-thousandths, multiply the quotient by six-hundredths, and divide the product by four-tenths.

254. $400 is due June 10, and $600 Nov. 10. When should both be paid?

255. Sold a quantity of goods for $351.50, for which I received a note payable in six months. How much did I receive for the goods?

256. If two-thirds of a ton of coal cost $8.33\frac{1}{3}$, how much will six-sevenths of a ton cost?

257. How many cords of wood, at $5.12\frac{1}{2}$ a cord, must a man give for 9125 bushels of wheat at $1.40 per bushel, and 85 bushels of rye at $1.25 per bushel?

258. Required the difference between the present worth and proceeds of $600, due in 2 years 6 months, at 6%.

259. If 8 yards of muslin, $1\frac{1}{4}$ wide, cost $1.25, what should be paid for 10 yards of the same quality $1\frac{1}{8}$ yards wide?

260. At what rate will $72.50, in 3 years 4 months 15 days, yield $14.68125 interest?

261. A, B, and C, in partnership, gained $4560. A's stock was $4800, which was $\frac{2}{3}$ of B's, and B's was $\frac{2}{3}$ of C's. What was the gain of each?

262. What is the difference between the simple and compound interest of $600 for 1 year 6 months 6 days, at 8%?

263. The longitude of Philadelphia is 75° 9′ west, and Cincinnati 84° 24′ west. What is the time at Cincinnati when it is 10 A. M. at Philadelphia?

264. What will be the cost of 25 loads of wood, each measuring 1 cd., 1 cd. ft., 12 cu. ft., at $4.50 per cord?

265. Find the G. C. D. of 529, 782, and 1127.

266. What is the cost of 86 yd. 3 qr. 2 na. of broadcloth, at $2.7-16 per yard?

267. If 2 tons 12 cwt. of coal cost $12.875, what will 6 tons $15\frac{3}{4}$ cwt. cost?

268. I bought 150 shares of stock at 97, and paid $\frac{1}{4}$% brokerage. How much did I gain by selling the same at 105?

269. What is the amount of $172.43 from June 23, 1870, to March 4, 1872, at $7\frac{3}{10}$%?

270. When gold is worth $112\frac{1}{2}$, what is the value in gold of $630 in currency?

271. What is the duty at 25% on 50 bags of coffee, each containing 124 pounds, valued at 38 cents per pound?

272. A house valued at $5750 is insured at $\frac{3}{4}$ of 1%. What is the premium?

273. What is the face of a note which yields $115.80 when discounted at a bank for 90 days?

274. What amount of stock can be bought for $7560 and allow $\frac{1}{4}$% brokerage?

275. If 25% is lost by selling flour at $9 per barrel, what was the cost?

276. What is the amount of £35 4s. 6d. for 2 years and 8 months, at 6%?

277. What are the net proceeds from the sale of 320 acres of land, at $22.50 per acre, commission for selling being 2%?

278. What is the insurance on a ship valued at $10000, at $\frac{1}{2}$%, including $1 for policy?

279. What is the average time for paying $50 due in 30 days, $75 due in 40 days, $150 due in 25 days, and $100 due in 60 days?

280. A merchant bought 9 cwt. 52 lb. of coffee for $400. For what must he sell it per pound to gain 12%?

281. Supply the second term in the proportion 7 : ? :: 12 : 36.

282. Multiply thirteen thousandths by sixty-four hundredths, and divide the product by 15.

283. Bought 12 boxes of shoes, each containing 48 pairs, at $.87$\frac{1}{2}$ per pair, and sold the lot for $556. What was the gain %?

284. If a piece of cloth 300 yards long and 1 yard wide shrink 5% in length and 3% in width, what does it measure after shrinkage?

285. In a school of 180 pupils, 6 were absent. Required the % of attendance.

286. If I buy wood at $8.24 per cord on 6 months' credit, for what must I sell it immediately to gain 10%?

287. What is the duty, at 30%, on 95 boxes of tin, containing 115 lbs. per box, invoiced at 8 cts. per pound, tare being 6 pounds per box?

288. A man has paid in 3 years $685.50 interest, at 10%. What was the principal?

289. If 75 tons of coal were required to run 5 engines 15 hours a day, what number would be required to run 30 engines 12 hours a day?

290. What is the discount on $500 due 9 months hence, at 8%?

291. A fox, 200 rods before a dog, runs 25 rods in a minute; the dog follows at the rate of 40 rods a minute. In what time will the fox be overtaken?

292. A man sold a chain for $224, and gained 40%. What did it cost?

293. What is the duty, at 40%, on 75 bales of wool, each weighing 375 pounds, invoiced at 30 cts. per pound; tare, 10%?

294. What is the difference between the discount and interest of $900 for 3 years 4 months and 20 days?

295. Three men hired a pasture for $150. A put in 4 horses 12 weeks; B, 6 horses 10 weeks; and C, 8 horses 15 weeks. How much must each pay?

296. If a quantity of provisions will last 630 men 108 days, how long will the same last 210 men?

297. What is the bank discount of $168.13 for 8 years 5 months?

298. What will be the duty, at 25%, on 622 yards of linen, at 30 cents per yard, and 622 yards of cotton at 17 cents per yard?

299. A man sold a watch for $95, which was 15% less than cost. What did it cost?

300. When gold is quoted $110\frac{1}{2}$, what is the value in currency of $2500 in gold?

301. What is the amount of $1500 for 1 year and 4 months, at $7\frac{3}{10}\%$?

302. When gold is quoted at 111, what is the value in currency of $875 in gold?

303. Sold my horse for $200, which was 20% less than his value. What was his value?

304. A merchant paid a broker $6180 for a draft on New York, allowing him 3% brokerage? What was the amount of the draft?

305. Divide eight thousand by forty-five thousandths, and multiply the quotient by five ten-thousandths.

306. A, B, and C shipped coal from Philadelphia to Portland. A had on board 240 tons, B 480, and C 500 tons. It became necessary to throw overboard 350 tons. What was the loss of each?

307. Find the third term in the following proportion: 16 : 80 : : ? : 50.

308. Bought 20 pairs of boots for $100, and sold them at $4 per pair. What was the loss %?

309. James, John, and Henry engaged to perform a piece of work. James can do it in 12 days, John in 15, and Henry in 20 days. In what time can the three together perform the work?

310. A fox has 60 rods the start of a hound, but the hound runs 12 rods while the fox runs 8. How many rods will the fox run before the hound overtakes him?

311. Sold my horse for $100, and gained 25%. What % should I have gained if I had sold him for $120?

312. A note of $1600, payable in 60 days, was discounted at a bank. How much was received for it?

313. If a man travels 150 miles in 5 days, how long will it take him to travel 1200 miles?

314. A broker bought 30 shares of bank stock at par and sold it at $8\frac{1}{2}$% discount. How much did he lose?

315. Required the amount of $860 from Jan. 25, 1870, to Jan. 5, 1872, at 9%.

316. How much will six 500 dollar U. S. 7-30 bonds cost at $8\frac{3}{4}$% premium?

317. Required the interest of three 1000 dollar U. S. bonds for 6 months at $7\frac{3}{10}$%.

318. Required the amount of $24.17 for 11 months 29 days, at 9%.

319. When 4% is lost on coffee sold at 12 cents per pound, what was the cost?

320. What is the amount of $125 for 2 years 6 months, at 6% compound interest?

321. A merchant bought 15 bales of calico, each containing 50 pieces of 30 yards each, at 22 cents per yard. For how much must he sell the lot to gain $16\frac{2}{3}\%$?

322. What are the avails of a note for $1728, dated Dec. 29, 1868, and due April 29, 1869, discounted at the Casco Bank?

323. If 5 barrels of flour serve a family of 12 persons 10 months, how many barrels will serve a family of 8 persons 2 years?

324. A bankrupt, whose property is worth $4000, owes A $2000, B $2500, and C $4500. To how much is each creditor entitled?

325. If $500 gain $20 in 8 months, what will $800 gain in 6 months?

326. My agent purchased a lot of land for $1432.23, and 30 tons of hay at $12.75 per ton. What will be the amount of his commission at $1\frac{1}{2}\%$?

327. My furniture, worth $1800, is insured for $\frac{2}{3}$ its value at $\frac{3}{4}\%$. What is the premium?

328. What is the commercial discount on a bill of goods amounting to $1250, sold on 4 months' time, at 5% off for cash?

329. A broker bought twelve 100 dollar U. S. bonds at par and sold them at $12\frac{1}{4}\%$ premium. How much did he gain?

330. If 12 horses eat 36 bushels of oats in 9 days, how many bushels will 45 horses eat in the month of March?

331. Multiply twelve-thousandths by fifteen-hundredths, and divide the product by five-tenths.

332. How many cubic feet of bark in a shed $42\frac{1}{2}$ feet long, 18.5 feet wide, and $12\frac{1}{4}$ feet high?

333. What would be the cost of the above at $7.50 per cord?

334. What is the duty, at 30%, on 25 pieces of broadcloth, each containing 35 yards, valued at $\$5.37\frac{1}{2}$ per yard?

335. Sold my horse for $200, which was 20% less than his value. What was his value?

336. What principal will gain $120 in 3 years 4 months?

337. How many square feet in the four walls of a room 28 feet long, 20 feet wide, and 12½ feet high?

338. I wish to obtain, at a bank, $698.25. For what sum must I give my note, payable in 4 months 15 days, at 9%?

339. A merchant sold flour at $12.50 per barrel, and gained 12%. If he sell at $13 per barrel, what per cent. profit will he make?

340. If two-fifths of a hogshead of molasses is worth $36, what is the value of one-half of the remainder?

341. What is the difference between the interest and discount of $273.50 for 1 year 8 months, at 8%?

342. What is the least common multiple of 24, 13, 8?

343. If I borrow $5000 in Portland, and lend it in San Francisco, how much do I gain in 3 yr. 11 mo. 20 d.?

344. A commission merchant received $12500 to invest in cotton, after deducting 5% commission. How many bales of 400 pounds each can he purchase at 35 cents per pound?

345. How many square yards in the walls of a room 30 feet long, 25½ feet wide, and 11 feet high?

346. A merchant bought 9 cwt. 30 lb. of coffee for $285. For what must he sell it per pound to gain 15%?

347. What will be the cost of seven hundred and fifty thousandths cords of wood, at $4 per cord?

348. A man sent to an agent $49.75 to buy sugar. What must he spend, reserving 2¼% for commission?

349. A field 40 rd. long and 30 rd. wide cost $140. What cost another field 75 rd. long and 20 ft. wide?

350. When gold is quoted at 112½, what is the value in currency of $1800 in gold?

351. What is the amount of $950 for 2 yr. 1 mo. 3 d., at $7\frac{3}{10}$%?

352. What is the interest of a 1000 dollar bond for 6 mo., at $7\frac{3}{10}$%?

353. What is the square root of 263169 ?
354. What is the square root of 106929 ?
355. What is the square root of 36729 ?
356. What is the square root of 22071204 ?
357. What is the square root of 18225 ?
358. What is the square root of 29855296 ?
359. What is the square root of 9765625 ?
360. What is the square root of 459684 ?
361. What is the square root of 390625 ?
362. What is the square root of 104976 ?
363. What is the square root of 444889 ?
364. What is the square root of 401956 ?
365. What is the square root of 186624 ?
366. What is the square root of 13616100 ?
367. What is the square root of 191844 ?
368. What is the square root of 763876 ?
369. What is the square root of 253009 ?
370. What is the square root of 4473225 ?
371. What is the square root of 1522756 ?
372. What is the square root of 119025 ?
373. What is the square root of 106929 ?
374. What is the square root of 331776 ?
375. What is the square root of 876096 ?
376. What is the square root of 1679616 ?
377. What is the square root of 7474757 ?
378. What is the square root of 4473225 ?
379. What is the square root of .169 ?
380. What is the square root of 19.876 ?
381. What is the square root of 48 ?
382. What is the square root of $85\frac{14}{15}$?
383. What is the square root of $8\frac{5}{7}$?
384. What is the square root of $27\frac{9}{16}$?
385. What is the square root of $\frac{10}{14}\frac{8}{7}$?
386. What is the square root of $\frac{32}{50}$?
387. What is the square root of $\frac{3}{4}$?
388. What is the square root of 2 ?
389. What is the square root of .717409 ?
390. What is the square root of $930\frac{1}{4}$?

391. What is the cube root of 12977875 ?
392. What is the cube root of 444194947 ?
393. What is the cube root of 99252847 ?
394. What is the cube root of 67917312 ?
395. What is the cube root of 157464 ?
396. What is the cube root of 32461759 ?
397. What is the cube root of 259694072 ?
398. What is the cube root of 77308776 ?
399. What is the cube root of 389017 ?
400. What is the cube root of 84604519 ?
401. What is the cube root of 48228544 ?
402. What is the cube root of 79112000 ?
403. What is the cube root of 21024576 ?
404. What is the cube root of 64964808 ?
405. What is the cube root of 54439939 ?
406. What is the cube root of 224755712 ?
407. What is the cube root of 5735339 ?
408. What is the cube root of 473963 ?
409. What is the cube root of 5746948 ?
410. What is the cube root of 21024576 ?
411. What is the cube root of 178453547 ?
412. What is the cube root of 264609288 ?
413. What is the cube root of 12977875 ?
414. What is the cube root of 247673152 ?
415. What is the cube root of 1879080904 ?
416. What is the cube root of 13997521 ?
417. What is the cube root of 53157376 ?
418. What is the cube root of 195112 ?
419. What is the cube root of $32\frac{1}{3}$?
420. What is the cube root of 379 ?
421. What is the cube root of $166\frac{3}{8}$?
422. What is the cube root of 74.088 ?
423. What is the cube root of 537.24 ?
424. What is the cube root of $\frac{35}{48}$?
425. What is the cube root of $\frac{5}{7}$?
426. What is the cube root of 1576.2364 ?
427. What is the cube root of $1\frac{25}{9}$?
428. What is the cube root of 438.643 ?

429. The base of a right-angled triangle being 60 feet, the perpendicular 90 feet, what is the hypothenuse?

430. What must be the length of a ladder to reach the top of a house 24 feet high, the foot of the ladder being 12 feet from the house?

431. If a line 160 feet long will reach from the top of a steeple 130 feet high to the opposite side of the street, what is the width of the street?

432. If a ball 6 inches in diameter weighs 40 pounds, what will a ball, whose diameter is 12 inches, weigh?

433. If a cubical box contains 54872 inches, what is the length of one of its sides?

434. If a triangle, whose perpendicular is 24 feet, contains 206 feet, what are the contents of a similar triangle whose perpendicular is 56 feet?

435. If the diameter of a circle is 20 feet, what will be the diameter of another circle three times the area of the first?

436. The hypothenuse of a right-angled triangle being 52 feet, the perpendicular 48, what is the base?

437. What is the diagonal of a floor of a room 30 feet long and 24 feet wide?

438. If a ball 5 inches in diameter weighs 75 pounds, what is the weight of a ball 11 inches in diameter?

439. What must be the length of a ladder to reach to the top of a chimney 50 feet high, the foot of the ladder being 15 feet from the chimney?

440. If an ox that girts 6 feet weighs 900, what will be the weight of an ox that girts 7 feet?

441. The diagonal of the floor of a square room is 25 feet. What is the length of one side?

442. If a globe, whose diameter is 5 feet, contains 65.44 cubic feet, what are the contents of a globe 20 feet in diameter?

443. The area of a triangle is 36 inches, and one side of it is 9 inches. What is the corresponding side of a similar triangle containing 144 inches?

444. If I pay $25 for the transportation of 85 barrels of flour 150 miles, what must I pay for the transportation of 350 barrels 75 miles?

445. Divide four hundred twenty-seven by one hundred fifty-five millionths, and multiply the quotient by fifteen ten-thousandths.

446. If a stack of hay, containing 8 cwt., is 8 feet in height, what will be the height of a similar stack containing 3 tons?

447. What is the surface of a sphere whose diameter is 8000 miles?

448. What are the contents of a sphere whose diameter is 60 inches?

449. If a pipe 5 inches in diameter will discharge a certain quantity of water in 12 hours, in what time will a 3-inch pipe discharge the same quantity?

450. If a triangle, whose base is 10 feet, has an area of 50 feet, what is the area of a similar triangle whose base is 20 feet?

451. If the weight of a ball 9 inches in diameter is 40 pounds, what is the weight of a similar ball 12 inches in diameter?

452. Mr. A gives his note to B for $240, $\frac{1}{2}$ payable in 4 months, and the other half in 8 months. What is the present value of said note, discount at 5% per annum?

453. A merchant learns that his vessel and cargo, valued at $36000, have been injured to the amount of $12000; he effects an insurance on the remainder at $5\frac{1}{2}\%$. What premium does he pay?

454. A tree broken off 20 feet from the ground and resting on the stump, touches the ground 50 feet from the stump. What was the height of the tree?

455. If 18 men can build 72 rods of wall in 4 days, how many rods will 38 build in 22 days?

456. What number is that which, being multiplied by three thousandths, the product will be 2637?

457. A can do a piece of work alone in 10 days, and B in 13 days. In what time can they do it if they work together?

458. If \$120 be divided among three persons, A, B, and C, so that when A has \$3, B shall have \$5, and C \$7, how much will each receive?

459. Bought a cow for \$30 cash, and sold her for \$35 at a credit of 8 months. Reckoning the interest at 6%, how much did I gain?

460. How many planks 15 feet long and 15 inches wide, will floor a barn which is $60\frac{1}{2}$ feet long and $33\frac{1}{2}$ wide?

461. A triangle, whose base is 12 feet, contains 84 square feet. What is the area of a similar triangle whose base is 20 feet?

462. Four persons traded together on a capital of \$600, of which A put in $\frac{1}{2}$, B put in $\frac{1}{4}$, C put in $\frac{1}{6}$, and D the rest; at the end of 4 years they had gained \$4728. What was each one's share of the gain?

463. If 50 persons consume 600 bushels of wheat in 3 years, how much will 278 persons consume in 7 years?

464. If I borrow \$2500 in New York and lend it in Portland, how much do I lose in 4 years and 6 months?

465. If a cable 2 inches in diameter will sustain a weight of 8000 pounds, what weight can be sustained by a cable 3 inches in diameter?

466. What is the present value of \$2880, $\frac{1}{2}$ payable in 3 months, $\frac{1}{3}$ in 6 months, and the rest in 9 months, at 6% per annum?

467. Bought cloth at \$1.25 per yard, which, proving bad, I wish to sell it at a loss of 18%. How much must I ask per yard?

468. If a ball, 2 inches in diameter, weighs 4 pounds, what will be the weight of a ball that is 6 inches in diameter?

469. A and B have a joint stock of \$2100, of which A owns \$1800 and B \$300; they gain in a year \$1000. What is each one's share of the profits?

470. Sold cloth at \$1.25 per yard and lost 15%. For what should I have sold it to gain 12%?

471. If the freight of 40 tierces of sugar, each weighing $3\frac{1}{2}$ cwt., 150 miles, cost \$42, what must be paid for the freight of 10 hhds. of sugar, each weighing 12 cwt., 50 miles?

472. I sold \$6910.80 worth of goods for a merchant at a commission of $2\frac{1}{2}$%. How much ought I to pay over to my principal?

473. If a stack of hay, 6 feet in height, weighs 525 pounds, what will be the weight of a similar stack that is 15 feet in height?

474. If a family of 14 persons spend \$1120 in 8 months, how much will 9 of the same family spend in 5 months?

475. A certain town is to be taxed \$4280; the property on which the tax is to be levied is valued at \$1000000. Now there are 200 polls, each taxed \$1.40. What will be the tax on one dollar?

476. Suppose a cistern has two pipes, and that one can fill it in $8\frac{1}{2}$ hours, the other in $4\frac{3}{4}$ hours. In what time can both fill it together?

477. A merchant has due him \$300 to be paid in 60 days, \$500 to be paid in 120 days, and \$750 to be paid in 180 days. What is the equated time for the payment of the whole?

478. Two men had each \$240. One of them spends 14%, and the other $18\frac{1}{2}$%. How many dollars more did one spend than the other?

479. If a globe of 2 inches in diameter is worth \$450, what is the value of a globe 4 inches in diameter?

480. The areas of two similar triangular fields are 80 and 90 acres, and a side of the former is 75 rods. Required the corresponding side of the latter.

481. If 8 barrels of flour will supply 240 men for 6 days, how long will 14 barrels supply 126 men?

482. A merchant has due him \$1500; $\frac{1}{6}$ is to be paid in 2 months; $\frac{1}{3}$ in 3 months; and the rest in 6 months. What is the equated time for the payment of the whole?

CHAPTER IV.

MISCELLANEOUS EXERCISES FOR ADVANCED CLASSES.

1. For what sum must a bank note be given to obtain, at 6% discount, $8000 for 6 months?

2. What is the diameter of a circular piece of land measuring $4\frac{1}{2}$ acres?

3. A hollow ball, 10 in. in diameter and 1 in. thick, contains within itself another ball 3 in. in diameter. How many qts. of water will be required to fill the space between them?

4. Reduce $\dfrac{2\frac{1}{3} \text{ of } \frac{6}{8}}{3\frac{1}{5} \times \frac{1}{2}}$ of $\dfrac{27\frac{1}{2}}{12} \div \left(3\frac{1}{5} \times \dfrac{\frac{1}{8}}{\frac{6}{7}}\right)$.

5. On $860.56, $149.63 interest was paid for 2 yr. 8 mo. 3 d. What was the rate?

6. What is the outside length of a cubic box, made of 1 in. boards, that will contain 10 bushels of grain?

7. What will be the cost, in Portland, of a bill of exchange on London for £3000, the rate of exchange being $109\frac{1}{2}$?

8. Add $2\frac{1}{2}$, $3\frac{2}{7}$, $\frac{1}{4}$ of $\dfrac{5\frac{1}{2}}{7}$, $\frac{4}{5}$ of $\frac{1}{3}$.

9. What are the contents, in gallons, of a cask 36 in. long, and whose bung and head diameters are 32 and 26 inches?

10. I shipped to Boston 850 tons of hay, which my agent sold at $22.50 per ton. He paid charges: For freight, $950; cartage, $112.50; storage, $65; and charged me $2\frac{1}{2}$% commission on sales. What sum must he remit to me?

11. What is the 5th power of the square root of 256?

12. How many posts, 6 feet apart, will be required to build 8 miles of fence?

13. A merchant hires money at a bank for 3 mo., at 6%, with which to pay his insurance premium, viz.: On his house, \$4500, at $\frac{1}{2}$%; on furniture, \$1500, plate, \$500, pictures, \$300, clothing, \$500, at $\frac{5}{8}$%; on his store, \$6000, at $\frac{1}{2}$%; on stock-in-trade, \$20000, at $\frac{3}{8}$%; cost of policy, \$1; survey of premises, \$1.50. For what sum must the note be given?

14. Divide 16^3 by $\frac{3}{8}$ of 4^4.

15. A man hires money at 6% with which he purchases flour at \$7.50 per bbl. After keeping it 60 days, he is obliged to sell it at \$7.35 per bbl. What was the % of his loss?

16. Multiply $2\frac{1}{5}$ of $\frac{1}{17}\frac{3}{7}$ by $\frac{4}{7}\frac{5}{7}$ of $\frac{1}{9}\frac{4}{7}$.

17. Find the interest, at 6%, on £860 7s. 6d. for 2 yr. 4 mo. 15 d.

18. A cubic foot of water weighs 1000 avoirdupois ounces, and iron is 7.8 times as heavy as water of the same bulk. What will be the weight of a hollow iron ball 15 in. in diameter and 3 in. thick?

19. A note was given on interest, at 6%, Jan. 15, 1869, for \$1874.18, on which were the following indorsements: Dec. 1, 1869, \$300; March 16, 1870, \$50; Jan. 1, 1871, \$325; Aug. 13, 1871, \$1200. What was due Jan. 1, 1872?

20. Write out in words and punctuate the following number: 423,486,794,235,376,891,352,698,204,345,789,268,173,571,-208,999,232,517,303,126,798,321.

21. What is the cube of 9^2?

22. A park, 100 rods long and 80 rods wide, is surrounded by a walk 15 feet wide. How many cubic yards of gravel will be required to cover the walk 5 inches deep?

23. How much water must be mixed with 45 gals. of alcohol, at \$1.65 per gal., to reduce the price to \$1.35 per gal.?

24. A, B, and C trade in partnership. A furnishes $\frac{1}{2}$ the capital, and is to have $\frac{1}{8}$ of the gain for extra services. B and C furnish \$3000 each, and the gain is \$5760. What is the share of each?

25. What is the difference between the simple, and the compound interest, on \$800 for 2 yr. 8 mo., at 6%?

26. Subtract $5\frac{3}{8}$ from 9.65, and divide the difference by $3\frac{7}{8}$ diminished by 2.65.

27. How many square inches of gold leaf will be required to gild a ball 13 in. in diameter?

28. If flour, sold at $12 per bbl., gains 15%, what would be the gain when sold at $11.25?

29. A grindstone, 4 ft. in diameter, has been worn off 4 in. all round. Allowing that the portion of the stone within 5 in. of the centre is of no value, what % of the stone has been used?

30. In what time will $475, at 6% simple interest, amount to $570.95?

31. Multiply four millionths by three and twenty-seven ten-thousandths.

32. A commission merchant has sold goods for me to the amount of $26485, at $2\frac{1}{4}$% commission. What amount is due me?

33. How many men will build 60 rods of wall in 10 days, if 24 men can build 648 rods in 18 days?

34. What is the interest on $8426.84, at $7\frac{3}{10}$%, for 1 yr. 7 mo. 8 d.?

35. A building 28 ft. wide, has the gable ends 15 ft. high. How long are the rafters?

36. The census of the United States for the several decades from 1790 to 1870, was as follows: In 1790, 3,929,827; in 1800, 5,305,925; in 1810, 7,239,814; in 1820, 9,638,131; in 1830, 12,866,020; in 1840, 17,069,453; in 1850, 23,191,876; in 1860, 31,443,322; in 1870, 38,555,983. Between what years was the % of increase greatest, and what was that %?

37. Required the contents, and the cost at $7.50 per cord, of a load of wood 10 ft. long, 4 ft. wide, and 4 ft. 6 in. high.

38. Coffee which cost 24 cents per lb., was marked for sale at 30 cents; but afterwards was marked up 5%, at which price 200 bags, averaging 165 lbs. each, were sold. The purchaser having failed before payment was made, a compromise was made at 80 cents upon the dollar. Did the seller gain or lose? How much per lb., and what %?

39. A grocer has sugars worth 11, 13, and 17 cents per lb., with which he wishes to fill 10 bbls., of 220 lbs. each, so as to sell the mixture at 15 cents per lb. What quantity of each kind will he use?

40. Reduce $.1\dot{8}$; $4.1\dot{7}$; $.00\dot{8}$, $3.\dot{8}\dot{7}$; $.42\dot{6}$ to common fractions.

41. Subtract $\frac{1}{2}$ of $\frac{4}{7}$ of $2\frac{4}{5}$ from $\frac{1}{3}$ of $\frac{3}{5}$ of $8\frac{1}{5}$; reduce the remainder to a decimal, and multiply the difference between that decimal and 3.24 by 6.7.

42. Four notes, of $500 each, are given for 3, 6, 9, and 12 months respectively. In how many months may they all be paid at one time?

43. A horse is teddered by a rope $45\frac{1}{2}$ ft. long. What is the area of the ground upon which he can graze?

44. What will be the contents, in cord measure, of the trunk of a tree 65 ft. long, and $2\frac{1}{2}$ ft. in diameter at one end, and 10 in. at the other?

45. What will be the amount of $160, at 6% compound interest, payable quarterly, from Sept. 1, 1870, to Dec. 13, 1871?

46. Divide two tenths by five ten-millionths.

47. A drover disposed of a lot of cattle, for ready money, for $23750, and after making purchases, for cash, amounting to $1300, he went to the bank and took up a note, on which he had previously received $8000 for 3 months. After reserving $230 for personal expenses, he made a purchase of merchandise amounting to $20000, for which he paid the remainder of his money, and obtained the balance from the bank for 6 months. For what amount was his note drawn?

48. How many yards of carpeting will be required to carpet a room 15 ft. 8 in. by 12 ft.?

49. When brooms are $3.50 per dozen, with a discount of 5% on bills over $100, what will be the cost of $16\frac{1}{2}$ gross?

50. What is 35% of the area of a rectangular piece of land 24 rods long and $14\frac{1}{2}$ rods wide?

51. If a ball 3 in. in diameter weighs 12 lbs., what will be the weight of a ball, of similar density, 8 in. in diameter?

52. What are the contents of a stock of 13 boards 16 ft. long, 15 in. wide at one end, and 11 in. at the other?

53. How many bushels of wheat can be placed in a car 20 ft. long, 8 ft. wide, and 7 ft. high?

54. A person being asked the time of day, replied that it was between 10 o'clock and 11, and that the hour and the minute hands were together. What was the time?

55. In the corner of a room is a pile of grain, in quarter cone form, whose height is 5 ft. and slant height 8 ft. What number of bushels does it contain?

56. A grocer purchased 13 hhds. of molasses at 70 cts. per gal., and sold it so as to gain on the whole $57.33. At what price per gal. was it sold, and what was the gain %?

57. Required the number of square yards in the ceiling and walls of a room of the following dimensions: 15 ft. 6 in. long, 14 ft. wide, and 10 ft. high. The room contains 4 windows, each 3 ft. 6 in. by 5 ft. 8 in.; 2 doors, each 6 ft. 4 in. by 2 ft. 6 in.; 1 fireplace, 3 ft. high and 3 ft. 6 in. long. And what will be the cost of lathing and plastering the room, at thirty-seven and a half cents per square yard?

58. A gentleman has a note in a bank, on which he received $575 for 3 mos., at 4% discount; and in order to take up the note, he goes to another bank and obtains the money for 6 mos. at 6%. For what amount was the last-named note given?

59. A well was dug in a circular form 6 ft. in diameter, and was then lined with a wall 8 in. thick. When the water is 11 ft. deep, what number of hhds. does it contain?

60. When exchange is at 108, what will be the face of a bill on Liverpool that can be purchased for $14400?

61. If 16 men can cut 320 cords of wood in 8 days, how many cords can 22 men cut in 17 days?

62. The value of the real estate in a town is $2,385,000; personal property, $865,000; and a poll tax of $2 is assessed upon 935 persons. The town raises by taxation: For schools, $12,000; roads and bridges, $4000; support of the poor,

$3000; pay of town officers, $800; interest on town debt, $320; fire department, $1000; contingent expenses, $3500. What will be the tax on each $ of valuation; and what will be the whole tax of A, whose property is valued at $5600, and who pays, also, the poll tax?

63. Reduce $\frac{2}{5}$ of $\frac{10}{16}$ of $\frac{9}{15}$ to a decimal.

64. What will be the cost, at 70 cts. per gal., of a cask of molasses, whose length is 16 inches, head and bung diameters, 10 and 12 inches?

65. Required the average time for the payment of the following bills of goods purchased Jan. 1, 1872: $150, payable Jan. 15; $300, payable Feb. 10; $600, payable March 1; and $1000, payable April 15.

66. Find the least common multiple of 8, 14, 16, 21, 33, 77, 85, 165.

67. Had 1 cent been placed at 6% simple interest at 12 o'clock, noon, on the day of the Declaration of the Independence of the United States, what would have been the amount of the investment at 3 o'clock P. M. Jan. 1, 1872?

68. At what time between 2 and 3 o'clock do the hour and the minute hands of the clock point in opposite directions?

69. Divide $\frac{11}{15}$ of $\frac{10}{33}$ of 16 by $\frac{5}{8}$ of $\frac{32}{45}$.

70. Give the whole contents of 4 loads of wood of the following dimensions: 8 ft. long, 5 ft. 3 in. high, and 4 ft. wide; 12 ft. long, 4 ft. high, and 4 ft. 2 in. wide; 9 ft. long, 3 ft. 4 in. high, and 3 ft. 6 in. wide; 16 ft. long, 3 ft. high, and 3 ft. 6 in. wide.

71. How many bushels of grain are there in a conical pile 5 ft. high, and 26 ft. in circumference?

72. What is the length of a diagonal path across an acre of and in the form of a square?

73. Find the amounts for which bank notes must be given, respectively, to obtain the following sums for the times specified:

$800 for 3 mos.	$1200 for 2 mos.
$4000 for 6 mos.	$200 for 4 mos.

74. What is the greatest common divisor of 1177, 1819, 2782, 4708?

75. What is the average time for the payment of the following notes, without grace? Jan. 1, $300 on 4 mos.; Feb. 1, $600 on 6 mos.; March 15, $800 on 9 mos.

76. When exchange is at $108\frac{3}{4}$, and brokerage at $\frac{1}{4}\%$, what will be the cost of a bill on Liverpool for £400?

77. How large a stick of square timber can be made from a log 20 in. in diameter?

78. Reduce $\frac{13}{147}$ to a decimal of eight places, and extract the square root of the same.

79. A greyhound running 91 rods a minute is $\frac{5}{8}$ of a mile behind a fox running 75 rods a minute. In how many minutes will the hound overtake the fox, and how far will each travel?

80. What number is that which being increased by $\frac{3}{4}$ of itself, and then doubled, gives 4 more than the square root of 2704?

81. What is the diameter of a ball equal in bulk to 8 balls, each 2 in. in diameter?

82. Does a man gain or lose, and how much, who obtains at a bank $1000 for a year at 6% discount, and then puts it at interest for the same time and rate?

83. What is the present worth of $2500 due in 9 mos.?

84. How many bricks, 4 by 8 in., will pave a walk 10 ft. wide and 4 rods long?

85. For a pile of wood 54 ft. long, 4 ft. wide, and 6 ft. 4 in. high, $80.16 was paid. How many cords were there, and what was the price per cord?

86. If I buy bank stock at 17% above par, what % do I receive on my investment, if the bank pays a dividend of $8\frac{1}{2}\%$ on par value?

87. What will it cost to plaster a room 15 ft. 6 in. long, 13 ft. 8 in. wide, and 9 ft. high, at 26 cts. per square yard?

88. The longitude of Portland is 70° 15′, and that of Chicago 87° 38′. What is the difference of time between the two places?

89. Estimating the weight of rails at 65 lbs. per yd., what is the entire weight of the rails used in constructing the Grand Trunk Railway from Portland to Montreal, a distance of 297 miles?

90. A pond whose area is 1000 acres, supplies a city of 250,000 inhabitants with water. Estimating the consumption of water, for all purposes, at 100 gals. per day for each person, how much would a week's use of water lower the pond? And if the tributaries to the pond carry into it, altogether, 1,100,000 gals. per hour, what change would be made in the depth of the water, by the influx and use, in a month of 30 days?

91. How many square-edged boards of equal width can be made from a log 18 ft. long and 16 in. in diameter, allowing $\frac{1}{4}$ in. for sawcut; and what would be the board measure of the whole?

92. A jeweler purchased a bar of silver weighing $5\frac{1}{2}$ lbs. Av. at \$1.10 per oz., and sold it at the same price per Troy oz. Did he gain or lose, and how much?

93. An agent received \$10,200 with which to purchase wheat at \$1.25 per bushel, after deducting his own commission of 2% on money paid out. How many bushels did he buy?

94. A merchant, during his first year in business, increased his capital by $\frac{1}{4}$ of itself; and the second year by $\frac{2}{5}$ of itself. During the third year he lost $\frac{2}{7}$ of all he had, and had remaining \$15,000. What was his capital at first?

95. Extract the square root of 11000.00011.

96. Find the cost per yd. of a piece of cloth of 24 yds., which sold for \$61.25 at a gain of 25%.

97. Sold cloth at \$2.62$\frac{1}{2}$ per yd. at a loss of $12\frac{1}{2}$%. At what price should I have sold it to gain the same %?

98. If a plough turns a furrow 15 in. wide, how far will a yoke of oxen travel in ploughing 4 acres of land, allowing that for every 20 rods ploughed they travel 1 rod in turning at the corner?

99. A has 5 rolls of bread and B, 3; C has none, but joins them in their meal, and proposes to pay for the whole with 8 pieces of money of equal value. How should the money be divided between A and B?

100. A gentleman has a garden of $\frac{5}{8}$ of an acre in the form of a square, which he wishes to inclose with a brick wall 16 in. thick and 9 ft. high. Allowing $\frac{1}{4}$ in. for each course of mortar, how many bricks will be required?

101. The diameter of the earth is (nearly) 8000 miles, and that of the planet Jupiter about 88000; but its density is only $\frac{1}{4}$ of that of the earth. How many times heavier than the earth is Jupiter?

102. A man builds a railroad at $33000 per mile. When completed, he finds that it has cost him $95 per rod. What % does he make on money expended, and what is his whole gain on a section of 9 miles?

103. If 30 men build a wall 90 ft. long, 8 ft. high, and 4 ft. thick, in 16 days of 10 hours, how many days of 8 hours will 60 men require to build a wall 120 ft. long, 10 ft. high, and 3 ft. thick?

104. A coal dealer purchases 275 long tons (2240 lbs.) of coal at $6 per ton; and after paying for freight, insurance, and other charges, $595, sold it at $9.50 per ton of 2000 lbs. What was his whole gain, and what the %?

105. Sold a bill of merchandise at wholesale at 30% off, and 5% off for cash. What was the whole discount?

106. If a laborer can remove 1 cubic yd. of earth per hour, what will be the expense of digging a ditch 200 ft. long, 4 ft. wide, and 3 ft. deep, allowing for wages $1.75 per day of 10 hours?

107. When gold is at 125, what is the gold value of $1500 in currency?

108. What is the face of a draft that can be purchased for $2500 when exchange is at $2\frac{1}{2}$% discount?

109. What is the length of a rope extending from the top of a pole 40 ft. high to the top of a stake 13 ft. high standing 35 ft. from the pole?

110. There are two fields, each containing 10 acres; one in the form of a square, and the other 4 times as long as it is wide. What will be the difference in the expense of fencing the two fields, the cost of the fence being \$2.25 per rod?

111. In what time will \$750 amount to \$960.85 at $7\frac{3}{10}\%$?

112. How much money must be invested to build a wall worth \$325, and to renew it every 15 years, allowing 6% compound interest?

113. In a warehouse A has 350 bbls. flour, worth \$8.25 per bbl.; B has 275 bbls., worth \$9; and C has 2500 bushels of corn, worth \$1.10 per bushel. The building takes fire, and the damaged flour and grain is sold all together for \$3100. How shall this money be divided between A, B, and C; what was each man's actual loss, and his loss %?

114. A began business Jan. 1 with a capital of \$2000; May 1 he received B as a partner with \$1500; and Sept. 15 C entered the firm with \$3000. On the first of the following July they dissolved partnership and found that their profits were \$5800. How much belongs to each partner?

115. Add all the prime numbers from 1 to 59 inclusive, and extract the square root of the sum.

116. An estate of \$19000 is to be divided between a widow, three sons and a daughter, in such a way that each son shall have \$1000 more than the daughter, and the widow \$1000 more than all the children. What will be the share of each?

117. A railroad company wish to build a fence on both sides of a section of their road 13 miles in length. The fence must be 5 boards high, each 8 in. wide, and the posts are to be placed 8 feet apart. There is also to be nailed upon each post, over the boards, a cleat $4\frac{1}{2}$ ft. long and 6 in. wide. The cost of the boards is \$13 per M., and of the posts 35 cts. each. What will be the total cost of the lumber?

118. Divide 42 ft. 2′ 8″ by 3 ft. 4′.

119. Assuming the weight of iron as in Example 18, what will be the weight of 112 miles of telegraphic wire $\frac{1}{8}$ in. in diameter?

120. One man travels north 3 days, at the rate of 175 miles per day; and another travels west the same time at the rate of 150 miles per day. How far apart are they?

121. There are two persons of the same ages; but if one was 10 years older, and the other 6 years younger, the former would be twice as old as the latter. What is their age?

122. How many square feet of glass are there in 8 windows of 12 panes each, the size of the panes being 10′ by 14′?

123. Find the greatest common divisor of 624, 480, and 1008.

124. What will be the length of one side of a cubical cistern that will hold 160 hhds.?

125. What is the interest, at $5\frac{1}{4}\%$, on £2972 19s. 11d. for 11 y. 7 m. 23 d.?

126. I sell goods for $384 more than they cost me, and gain $12\frac{1}{2}\%$. What did the goods cost?

127. A monument in the form of a square pyramid is 2 ft. 10 in. square at the base, and is 11 ft. high. Allowing 175 lbs. to the cubic foot, what is the weight of the monument?

128. Lead is about 11 times as heavy as water. Taking water as a basis (Ex. 18), what will be the weight of 135 rods of lead pipe $1\frac{1}{4}$ in. in diameter and $\frac{1}{8}$ in. thick?

129. What must be the inside diameter of a globe that will contain 5 gals. of water?

130. A man has three farms, the first of which contains 28 A. 2 r. $6\frac{1}{2}$ p.; the second, 45 A. 1 r. 8 p.; and the third, 65 A. 3 r. The cost of the first was $45 per acre; of the second, $80; and of the third, $35. He sells the whole at $55 per acre. Did he lose or gain, how much, and what %?

131. A and B carry a weight of 360 lbs. suspended on a pole between them, 4 ft. long. If the weight is removed from the centre 7 in. towards A, how much does each carry?

132. When money is worth 6% per annum, do I gain or lose, and what %, by buying merchandise on 9 mos. credit, and selling it immediately for cash at the same price?

133. What is the weight (see Ex. 18) of an iron cylinder 8 in. in diameter and 22 ft. long?

134. Subtract five hundred and seventy-nine thousand eight hundred and ninety-one, from one million three hundred and sixty-two thousand four hundred and sixty-seven, and multiply the remainder by three and three thousandths.

135. A man purchasing a barrel of flour for $\$9\frac{3}{8}$, 14 lbs. of sugar at $13\frac{1}{4}$ cts., and a pair of boots for \$7.50, hands the shopkeeper a \$20 bill. How much should be returned to him?

136. A grocer has two chests of tea, each weighing 60 lbs.; one costing \$45, and the other \$84. He makes the price so as to gain 20%, and sells 4 lbs. of the former, and 3 lbs. of the latter. How much does he receive?

137. A field of 5 acres, in the form of a square, is to be surrounded by a board fence $4\frac{1}{2}$ ft. high, to be built of boards 8 in. wide, the lower one being raised 2 in. above the ground, and with a space of 3 in. between the boards. How many square feet of boards will be required?

138. When hay is worth \$18 per ton, how many loads of 1500 lbs. each must be given in exchange for a horse valued at \$150, and a carriage worth \$120?

139. Add all the odd numbers between 100 and 120, and extract the cube root of their sum to the second decimal place.

140. Find the value of $\dfrac{14\frac{1}{2}-9\frac{1}{2}\div\frac{4}{7}\,(18\frac{2}{5}+4\frac{7}{8})}{(9\frac{1}{4}-\frac{25}{9})+\quad(\;7\frac{3}{7}+\frac{12}{13})}$.

141. If 6 men dig a cellar 28 ft. long, 18 ft. wide, and 10 ft. deep, in 3 days of 10 hours, in how many days of 8 hours will 9 men dig a cellar 42 ft. long, 24 ft. wide, and 8 ft. deep?

142. A and B together can do a piece of work in $14\frac{1}{2}$ days, and A can do it alone in 25 days. In what time can B do it alone?

143. Divide fifty and fifty ten-thousandths, by fifty millionths.

144. At \$1.75 per sq. ft., what is the difference in the value of a piece of land 87 ft. by 42 ft., and one 57 ft. square?

145. What is the value of 14 cwt. 3 qr. 15 lb. of iron at $3.25 per cwt.?

146. Multiply 52 A. 3 r. 13 p. 14 sq. yd. by 47.

147. A note was given March 4, 1868, for $1000, on which were subsequently made the following indorsements: Dec. 1, 1868, $75. July 17, 1869, $15.50. Aug. 18, 1870, $30.50. Dec. 11, 1870, $500. Jan. 3, 1871, $150. What was due Aug. 18, 1871?

148. If the interest of $1200 for 2 y. 3 mos. is $168.75, what is the rate?

149. If 29¼ yds. of cloth, ⅞ yd. wide, cost $59, what will be the cost of 21½ yds., of the same quality, 1½ yds. wide?

150. The greater of two numbers is 7½ times the less, and their sum is 136. What are the numbers?

151. What number is that from which if we deduct ⅜ of itself, and ⅔ of the remainder, there will be 28 left?

152. How much interest was due Dec. 11 upon the following accounts: $200 due March 19, $200 due March 24, $1000 due March 25, and $600 due April 10.

153. A man buys goods at sundry times as follows: May 1, a bill of $800 on 4 mos. May 15, a bill of $1200 on 6 mos. June 1, a bill of $1500 on 8 mos. June 15, $800 for cash, and gives a note for the whole at 60 days with interest. What should be the date of the note?

154. The shadow of a flagstaff which is 80 ft. high is 45 ft. 6 in. What would be the length of an object whose shadow is 11 ft. 9 in.?

155. Find the prime factors of 8866.

156. A kettle of hemispherical shape is 2 ft. in diameter. How many pailfuls, of 3 gals. each, will it contain?

157. A merchant who has flour, the cost price of which is $9.75 per bbl., exchanges it with a farmer for potatoes, at 85 cts. per bushel, on condition that the price of the flour shall be advanced 5%, and the farmer shall deduct the same % on his potatoes. How many bushels of potatoes will be required to pay for 2 bbls. of flour?

158. How many miles are there in 47.8326 kilometers?

159. What is the surface of a sphere whose diameter is 18 inches?

160. If 18 days' work will pay for 2 hhds. of molasses, and 8 hhds. of molasses are worth 12 tons of hay, and 3 tons of hay will purchase 2 bags of coffee, and 8 bags of coffee are worth 40 yds. of cloth, how many yds. of cloth can be bought for 9 days' labor?

161. How many hectoliters will a box contain whose length is 2.25 meters, width 1.75 meters, and depth 1 meter?

162. If 22% of a merchant's sales is profit, what % does he gain?

163. An army of 6000 men was supplied with 12 days' rations at 30 ounces per day for each man. At the end of 6 days 1000 men have been lost, and it is required to make their rations last 9 days longer. What will be each man's daily allowance?

164. If 60 reams of paper will print 3000 pamphlets, of 10 sheets each, how many reams will print 1480 pamphlets of $12\frac{1}{2}$ sheets each?

165. The rafters of a building 24 ft. wide are 20 ft. long. How high is the gable end?

166. Goods are bought to be paid for as follows: $\frac{1}{5}$ in 3 mos., $\frac{1}{3}$ in 6 mos., and the remainder in 9 mos. What will be the equated time for the payment of the whole?

167. Four men are in partnership for one year, and their united capital is \$42000. The first man puts in his capital Jan. 1; the second, Feb. 1; the third, April 1; and the fourth, May 1. At the end of the year, they have all gained an equal sum. What was the capital of each man?

168. How many hectares are there in a piece of land $\frac{1}{2}$ mile square?

169. If I wish to obtain from a bank \$1500, for what sum must a note be given for 90 days?

170. The solid contents of a sphere are 268.08 cubic inches. What is the diameter?

171. A piece of land containing 2 acres is 5 times as long as it is broad. What are the length and the breadth?

172. If 8 men saw 30 cords of maple wood in the same time as 10 men saw 28 cords of oak, and if 6 men saw 36 cords of oak in 4 days of 9 hours each, how many hours a day must 7 men work to saw 90 cords of maple wood in 6 days?

173. How many kilometers are there in 26589 meters?

174. Find 35% of the area of a piece of land 46 rods long and 17 rods wide.

175. What sum should be discounted for the present payment of $1800 due in 10 months?

176. In a certain school $\frac{1}{10}$ of the pupils are under 12 years of age; $\frac{1}{8}$ between 12 and 14; $\frac{1}{4}$ between 14 and 16; $\frac{3}{16}$ between 16 and 18; and 27 are over 18. What is the whole number of pupils?

177. If coal costs $4.62\frac{1}{2}$ per ton at the mine, and the freight, insurance, unloading, &c., cost $2.87\frac{1}{2}$ per ton, at what price should it be sold to gain 15%?

178. What sum of money must a man lay up annually which shall amount, at 6% compound interest, to $10000 in 20 years?

179. Extract the cube root of 205,692,449,327.

180. A room is 16 ft. long, $14\frac{1}{2}$ ft. wide, and 10 ft. high. What is the distance between an upper corner, and the opposite lower corner?

181. The circumference of a circle is 3 ft. 4 in. What is the side of a square of equal area?

182. I owe a note of $2500 in Savannah, which has been on interest 8 mos. at 7%. If exchange is $101\frac{3}{8}$, what will be the face of a sight draft to pay the note and interest?

183. A merchant sells flour at $7.92 per bbl., and loses 4%. At what price should it be sold to gain 8%?

184. A man purchases 12 books, the first of which costs 60 cents, and the second, 65 cents, and so on in arithmetical progression. What is the cost of the whole?

185. What must be the diameter of a cylindrical cup 6 in. high to hold a gallon?

186. If I purchase a yoke of oxen on 4 mos. credit for $180, and sell them immediately for $192 cash, what % do I gain, when the rate of interest is 6%?

187. A man being asked the time of day, said that $\frac{3}{10}$ of the time before midnight was equal to $\frac{1}{2}$ the time past noon. What was the time?

188. What must be the depth of a cylindrical measure $18\frac{1}{2}$ in. in diameter, to contain a bushel?

189. Bought a piece of land 65 rods long and 38 rods wide, for $600, from which I sold 8 acres 2 roods 10 rods, at $60 per acre. I then sold the remainder for $446.875. At what price per acre was the last lot sold?

190. In a triangular field of corn which commences at one of the angles with a single hill, and with three hills in the row next to it, there are 41 rows. How many hills are there in the field?

191. A cylindrical ash barrel is made 15 inches in diameter and 25 inches high. How many bushels will it contain?

192. In Example 191, how many square feet of sheet iron were required to make the ash barrel, allowing in the circumference and in the diameter of the bottom, 1 inch for lapping at the joint?

193. When gold is at $110\frac{3}{8}$, what is the gold value of $6000 in currency?

194. Find the cube root of 8^6.

195. Divide the difference between $\frac{3}{16}$ and four millionths, by .0001.

196. What is the capacity, in gallons, of a cask 26 in. long, and head and bung diameters 17 and 22 inches?

197. What will be the cost, at $8.25 per cord, of a pile of wood 14 ft. long, 7 ft. 4 in. high, and 4 ft. wide?

198. How many bricks will be required to construct the walls and chimneys of a house of the following dimensions? Length, 42 ft.; width, 24 ft.; height, $19\frac{1}{2}$ ft.; height of the

gable ends, 11 ft.; thickness of the walls, 1 foot. There are to be three doors, each $4\frac{1}{2}$ ft. by 8 ft.; 12 windows, 4 ft. by $6\frac{1}{2}$; and 14 windows, $3\frac{1}{2}$ ft. by $5\frac{1}{2}$. There are to be two chimneys, built from the bottom of the cellar, which is 8 ft. deep, to extend 7 feet above the ridge of the roof, each 24 by 16 inches.

199. How many yds. of carpeting, $\frac{3}{4}$ yd. wide, will be necessary to carpet a room 18 ft. 4 in. long, and 15 ft. wide?

200. A bin for grain is 8 ft. long, and 4 ft. wide. How high must it be to contain 275 bushels?

201. Bought 60 shares of railroad stock at 97, and sold the same at par after receiving a dividend of $2\frac{1}{2}\%$. What was my whole gain, and what the gain % on my investment?

202. If 4 compositors in 6 days of 10 hours can set 90 pages of types, each page containing 36 lines of 50 letters, how many compositors will be required to set 360 pages, each page containing 40 lines of 54 letters, in 8 days of 8 hours?

203. When gold is at $112\frac{1}{2}$, and exchange on Paris at 5.16, what is the face of a bill on Paris that can be bought with $8000 in currency?

204. A boy spent 1 cent on Monday, 2 cts. on Tuesday, 4 cts. on Wednesday, and so on for every week-day for a fortnight. How much did he spend the last day, and how much in all?

205. What is the accurate interest on a government bond of $5000 at $7\frac{3}{10}\%$, from Jan. 1 to March 1, inclusive, 1872?

206. A railroad has a capital stock of $28,000,000. Its transactions for the year ending October 31, 1870, were as follows: *Receipts*—From passengers, $4,032,023.39; from freight, $9,151,750.42; from mails, expresses, and all other sources, $795,740.19. *Expenditures*—Repairing and maintaining roadway and real estate, fences, and taxes on real estate, $3,558,143.04; repairing engines, tenders, passenger and freight cars; tools, oil, fuel, watchmen, &c., $2,728,968.58; operating the road, including salaries, agencies, oil, fuel, water, general superintendence, and contingent expenses, $4,366,580.77. The corporation also paid 6% interest on a

debt of $12,000,000; and certain other items of interest amounting to $223,880.66; for rent of branch roads, $226,848.04; United States tax on passenger earnings and dividends, $172,964.88; and it was decided to reserve, for contingent purposes, at least $300,000, before declaring a dividend. What dividend, omitting fractions of %, was declared, and what was the exact amount of surplus reserved?

207. Bought a piece of cloth which proved to be but $\frac{7}{8}$ as long as it was marked; but I find that if I sell it at $6 per yd., I shall gain 5% on the first cost. What did the cloth cost per yd.?

208. Bought a bill of goods amounting to $6845, and after paying charges, $65, I sold the same at an advance of $12\frac{1}{2}$%, and took a note for 60 days which I had discounted at a bank at 6%, and with the proceeds bought a bill on London, exchange being at $109\frac{1}{4}$. What was the face of the bill?

209. When 5% government bonds are quoted at 104, what sum must be invested to yield an annual income of $800?

210. After disposing of 7 A. 3 r. 13 p. of land to one man, and 16 A. 1 r. 35 p. to another, I find I have sold 23% of my farm. How much have I left?

211. If a carriage wheel turns $6\frac{1}{2}$ times in going $6\frac{1}{2}$ rods, how many times will it turn in going $2\frac{1}{4}$ miles?

212. A ladder 20 ft. long, standing 12 ft. from a house at the bottom, leans against the house, 4 ft. below the eaves. How high is the house, and how much must the ladder be lengthened to reach 1 foot above the eaves?

213. Two pieces of cloth were originally of the same length; but after 15 yds. had been sold from one, and 24 yds. from the other, the shorter piece was found to be $\frac{4}{5}$ of the other. What was the original length?

214. Two men, A and B, 100 miles apart, are traveling towards each other, A at the rate of $16\frac{1}{4}$ miles in 5 hours, and B at the rate of $10\frac{1}{2}$ miles in 3 hours. If A travels 2 hours before B sets out, how far will each travel before they meet?

215. On what day will $860, put at 6% interest Jan. 1, amount to $900?

216. A and B trade in partnership and their profits amount to $2280; of which A's share is $960. B's capital is $11000. How much capital had A?

217. Sold a quantity of goods for $1100, thereby losing 10%, whereas I had expected to gain 15%. What was my whole loss?

218. A garrison of 400 men is supplied with provisions for 8 months. At the end of 2 months it was decided to reduce the garrison so as to make the provisions last 12 months from that time. How many men were sent away?

219. Amos Brown gave a note, Nov. 1, 1870, to Thomas Wells for $1800, with interest at 6%. On this note the following indorsements were subsequently made: Jan. 25, 1871, $265; March 1, 1871, $18; April 1, 1871, $7.50; June 15, 1871, $1100; Sept. 1, 1871, $30; Oct. 10, 1871, $300. Soon after the last payment, Brown failed, and Wells agreed to relinquish the note for 75 cts. on the $. What did he receive at settlement, Dec. 7, 1871?

220. The circumference of a circular pond is 100 rods. What is its diameter, and its area?

221. A person buys 90 apples at 2 for a cent and 90 at 3 for a cent. Does he gain or lose, and how much, by selling the whole at 5 for 2 cents?

222. Three persons, A, B and C, travel in the same direction around an island 45 miles in extent; A, at the rate of 3 miles; B, 4 miles, and C, 5 miles, per hour. In what time will they be together at the place where they set out, traveling 10 hours per day, and how far will each have traveled?

223. Required the contents of the following lot of lumber, and the cost, at $18 per M.; 12 boards, 13 ft. 6 in. long, and 15 in. wide; 10 boards, 22 ft. long, 12 in. wide; 4 stocks, 12 boards each, 15 ft. long, 11 in. wide; 13 boards, 12 ft. long, 16 in. wide at one end, and 12 in. at the other?

224. Mixed 45 bushels of corn at .95, with 30 bushels at $1, and 25 bushels at $1.05. At what price per bushel must the mixture be sold to gain 5%?

225. A note for $800, without interest, due Sept. 15, 1872, was paid May 1, 1872. What was the discount, money being worth 7%?

226. A man divided $16500 among three children in such a manner that the second was greater by one-half than the first, and $\frac{1}{2}$ of the first was $\frac{1}{6}$ of the third. What was the share of each?

227. A man imports 60 pieces of broadcloth, 14 yds. each, at $2.75 per yd. The duties and other charges amounted to $640. At what price per yd. must he sell it to gain 15%?

228. A man has a stack of hay 12 ft. in diameter, and 18 ft. high. The sides are perpendicular to the height of 12 ft. above the ground, and the remainder of the stack is conical in shape. Allowing 12 cubic yds. to the ton, what is the weight of the whole stack?

229. Reduce £468 10s. 4d. to United States money, exchange being at $108\frac{3}{4}$, and find the interest on the same, at 7% for 4 months 8 days.

230. Change 8 lbs. 4 oz. Avoirdupois weight to Troy weight.

231. The interest on a certain sum for 1 mo. 13 d., at 7%, is $4.05. What is the principal?

232. If I buy railroad stock at $109\frac{1}{2}$, and receive annually a dividend of 7%, what % do I receive on my investment?

233. Bought a house and lot for $6000. For what must I rent it to gain 6% on my money, and to pay $25 for repairs, $22.50 for insurance, and taxes at $1\frac{1}{4}$% on $\frac{3}{4}$ of the valuation?

234. A bill of goods for $4200, on 4 mos. credit, is offered for $4110, ready cash. Do I gain or lose, and how much, by taking them at the cash price, money being worth 6%?

235. How many feet of boards will be required to cover a building, including the roof, 46 ft. long, 23 ft. wide, $19\frac{1}{2}$ ft. high; the height of the roof being 12 ft.?

236. A note was given Sept. 4, 1870, for $1300, with interest at 7%. July 12, 1871, a payment of $575.50 was made. What was due April 1, 1872?

237. How many shingles will be necessary to cover the roof of a building 45 ft. long, 25 ft. wide, height of roof 18 ft.; allowing that the shingles average $3\frac{3}{4}$ in. in width, and are to be laid 5 in. to the weather; also that the roof projects $1\frac{3}{4}$ ft. over the eaves, and $1\frac{1}{4}$ ft. at each end?

238. What are the contents, in board measure, of 4 planks, 18 ft. long, 15 in. wide, and 3 in. thick?

239. Reduce 5 hectares to square rods.

240. When gold is at $112\frac{1}{2}$, exchange on Havana at $3\frac{1}{2}\%$ premium, and brokerage $\frac{1}{4}\%$, what will be the cost in currency of a draft on Havana for \$22500?

241. Extract the square root of the product of the squares of 11 and 16.

242. If a piece of work can be done by 4 men in 3 days; or by 6 women in $2\frac{1}{2}$ days; or by 7 boys in 4 days; in what time can a man, a woman, and a boy do it together?

243. For what sum must a bank note be given for 60 days, to obtain the money to pay for the following bill of goods: 77 pieces sheeting, $31\frac{1}{2}$ yds. each, at $7\frac{1}{2}$ cts.; 8 pieces of broadcloth, 14 yds. each, at $\$3.62\frac{1}{2}$; $5\frac{1}{2}$ doz. shawls, at \$66 per doz.?

244. Goods are marked at 25% advance on the cost, but are sold at a discount of 15% on the asking price. What is the gain %?

245. What is the difference between the area of a square circumscribed about a circle 18 in. in diameter, and the area of the largest square that can be inscribed within the same circle?

246. With \$12000 I purchased a draft on New Orleans at $\frac{3}{4}\%$ premium, which I sent to my agent there to pay for cotton purchased for me at $2\frac{1}{2}\%$ commission. What was the value of the cotton purchased?

247. A man divides 4 A. 1 r. 36 p. into 28 building lots. What will be the cost of one of those lots at $62\frac{1}{2}$ cts. per sq. ft.?

248. A pile of wood which contains $4\frac{1}{2}$ cords, is 7 ft. 6 in. high, and 4 ft. wide. What is the length?

249. For what sum must a bank note be drawn for 60 days, at 6%, to make immediate payment of a demand of $1200 due in 8 mo. 15 d.?

250. What is the bank discount on a note of $800 for 3 mos.?

251. If I buy flour at $8.50 per bbl., and retail it at the rate of 20 lbs. for $1, what is my gain %?

252. When money is worth 6%, what can I afford to pay for railroad stock that yields a dividend of 5% semi-annually?

253. At what % will $750 amount to $847.03 in 2 y. 3 mos.?

254. If I compromise with an insolvent creditor at 70 cts. on the $, and then discount 2% for immediate payment, what is my total loss on a demand of $6500?

255. If I purchase for 112, U. S. 5-20's which bear interest at the rate of 6% in gold, payable semi-annually, when gold is at $110\frac{5}{8}$, and after keeping them 1 year, sell them at $111\frac{3}{4}$, what % do I make on my investment?

256. $\frac{3}{7}$ of a certain number exceeds $\frac{1}{4}$ of the same number by 10. What is the number?

257. If 12 men can perform a piece of work in 18 days, how many men will be required to perform a piece of work 3 times as large in 12 days?

258. If a certain number is doubled, and the product divided by 3, and the quotient squared, and that square increased by $\frac{1}{2}$ of itself, the result will be $\frac{1}{6}$ of the square of 12. What is the number?

259. In 4 yrs. 6 mos. a sum of money at $7\frac{3}{10}\%$ amounted to $956.87. What was the sum?

260. A man offered a bill of goods for $1800 on 6 mos. credit, or for the present worth of that sum for cash. I accepted the latter offer, and obtained the money at a bank for the same time at 6%. Did I lose or gain, and how much?

261. What will it cost to insure a house worth $6000, at $\frac{1}{2}\%$ on $\frac{3}{4}$ of its valuation, and $1800 worth of furniture at $\frac{3}{5}\%$ on $\frac{4}{5}$ of its value, allowing $1 for the cost of the policy?

262. What is 9% of eleven thousand eleven hundred and eleven dollars?

263. A merchant's sales average 15% profits, and his losses by bad debts amount to $1500. What is the amount of his sales, if his net income is $3100?

264. What is the accurate interest on $1400, at 6%, for the month of July?

265. If I hire money at a bank for 4 mos., at 6%, with which to purchase a horse at $180, what does the horse really cost me?

266. How many days are there in 5% of the year 1872?

267. What is the least common multiple of the numbers 1 to 12 inclusive?

268. What quotient will be obtained by dividing the cube of 75 by the $\frac{1}{8}$ part of 1000?

269. What profit do peaches pay at 2 cts. apiece, which cost 60 cts. per hundred, if 10% of them are lost by decay?

270. What is the board measure of 4 sticks of timber 12 by 10 in. and 18 ft. long?

271. What will it cost, at 30 cts. per centiare, to plaster a hall 76 ft. long, 54 ft. wide, and 18 ft. high, deducting 10% for windows, doors, and base?

272. Compute the duties on the following articles: 8 casks of raisins, at 11 cts. per lb., gross weight 888 lbs., tare 12 lbs. per cask, duty 25% *ad valorem;* 12 boxes sugar, 400 lbs. each, at 7 cts. per lb., tare 10%, duty 24% *ad valorem;* 60 hhds. molasses, 63 gals. each, at 54 cts. per gal., leakage 2%, duty 20%; 1 box books, 75 vols., at 5 cts. per vol.

273. A note of $400 was given Jan. 1, 1871, at 6% interest, on which a payment of $25 was made the first of each subsequent month during the year. What was due Jan. 1, 1872?

274. The difference in time between Boston and San Francisco is 3 h. 25 m. 31 s. What is the difference in longitude?

275. If by selling cloth at $4.75, I lose 8%, at what price must it be sold to gain 12½%?

276. A and B are in trade; A's capital is twice that of B's. B gains 50%, and A loses $4000, when A has $\frac{2}{3}$ as much as B. What was the original capital?

277. What will be the proceeds of a bank note for 90 days, for $625, at 7%?

278. If I own $\frac{3}{16}$ of a ship which is worth $18000, what part shall I have left, after selling $\frac{1}{5}$ of $\frac{4}{9}$ of my share, and what will it be worth?

279. The cube of 3.5 is the square root of what number?

280. A railroad company has $\frac{3}{4}$ of an acre of land covered with wood 11 ft. high. How many cords are there?

281. A, B, and C trade in company. A puts in $\frac{1}{3}$ of the capital, B $\frac{5}{12}$, and C the remainder. How shall a gain of $2150 be divided among them?

282. How many times does a common clock strike in 24 hours?

283. A school has an annual income of $1200, and receives, once in 15 years, $1396 for renewing furniture. What is the amount of its funds invested at 6%?

284. My agent in Liverpool sends me a bill of goods, purchased by my order for £2000, and charges me $1\frac{3}{4}$% commission. What will be the cost of a bill of exchange to pay the bill, the course of exchange being $108\frac{3}{4}$?

285. A town votes to raise, for sundry purposes, $18750. Allowing 3% for collecting, for what sum must the tax be levied?

286. What is the amount of $11925.76 for 4 y. 7 mos. 19 d. at $7\frac{3}{4}$%?

287. A draft on Liverpool for £1000 cost $5525.33 in currency, when gold was at 112. What was the rate of exchange? 12+

288. When gold is at $110\frac{3}{8}$, what will be the cost in currency of 375 M. of lumber in Montreal at $26 per M.?

289. If a man pays a tax of 5% on his income over $1000, and after paying his tax has remaining in all $3710, what is his whole income?

290. A, B, and C can do a piece of work in 10 days, and B and C can do it in 18 days. In what time can A do it alone?

291. A man who owes $27500, becomes insolvent, and his assets are $11200. The expenses of settling are $525. What will be the rate of the dividend, and what will a man receive who has a claim for $3600?

292. A speculator purchases 6 hectares of land for $1050, and divides it into lots of 8 ares each. What must be the price per lot to gain 30%?

293. The distance between the opposite corners of a square field is 50 rods. How many acres does it contain?

294. If I wish to make a payment of $50 the first of each month from Jan. to July, and one of $100 per month from Aug. to Dec., at what time can I make the whole in one payment?

295. How many bricks of the ordinary size will be required to pave a yard 6 rods long and 4 rods wide?

296. What will be the amount of $600 at $4\frac{1}{2}\%$ compound interest for 5 years?

297. What % do I make by purchasing flour at $7.50 per bbl., cash, and selling the same for $8.25 on 3 mos. credit, money being worth 6%?

298. On a note of $750, dated Jan. 1, a payment was made July 15, that was $13 more than the interest then due; and another payment of $300 was made Sept. 25. What was due Oct. 12, and what was the payment of July 15?

299. How many bushels of wheat will a hhd. of 63 gals. capacity contain?

300. My agent in New York has sold for me an invoice of lumber amounting to $22850, charging me 3% commission. One-half the proceeds he remitted to me by draft, charging $\frac{1}{4}\%$ brokerage, and with the other half he purchased for me molasses at .46 per gal., and charged 2% commission. How many hhds. of molasses did he ship to my order, and what was the amount of the draft sent?

301. A man sold goods at a gain of $12\frac{1}{2}\%$, and invested the proceeds and sold at an advance of 8%; then invested again and sold at a loss of 5%, when he had \$9618.75 left. What was his original capital?

302. Extract the cube root of the square of the largest number that can be written with three figures.

303. A man left \$8000 to be divided between two sons, aged 16 and 18 respectively, in such a way that the parts being put out at 6% simple interest, should amount to equal sums when the sons respectively should become of age. What were the parts?

304. What decimal of a rod is .285 of a foot?

305. The area of a cubic block is 384 inches. What is the length of a diagonal of one of its faces?

306. Bought a note for 50 cts. on the \$, and then collected 13% more than I paid, and thereby gained \$112. What was the face of the note, and what amount did I collect?

307. What is 75% of the difference between the second root of 256, and the second power of the same number?

308. A man received \$85.25 interest on \$1265, at 6%. What was the time?

309. Reduce $\frac{1}{9}$ of $2\frac{1}{4} + (\frac{1}{3}$ of $\frac{3}{5} \times 1\frac{1}{3}) \times 10\frac{1}{2}$.

310. How many steps, each 2 ft. 8 in., will a man take in walking from Boston to New York, 265 miles?

311. Find the sum, difference, and product, of $6\frac{1}{8}$ and $12\frac{5}{12}$; also the sum of those three results.

312. What is the board measure of the largest square timber that can be sawn from a log 16 ft. long and 17 in. in diameter?

313. How many square feet of surface in a stove pipe 16 ft. long and 7 in. in diameter?

314. A can build a piece of wall in 16 days, and A and B together can build it in 10 days. After $\frac{1}{4}$ of the wall is built, in what time can B finish it?

315. A note of \$600 was given Jan. 1, at 6% interest, on which a payment of \$225 was made July 3. Oct. 15 the note

was purchased at 3% discount on its value at that time. What sum was paid for it?

316. A man has a bin 28 ft. long, 5 ft. 4 in. wide, and 4 ft. deep, filled with wheat. What is it worth, at $1.10 per bushel?

317. In how many days will $75, at $7\frac{3}{10}\%$ interest, gain .80?

318. If a ball 3 in. in diameter weighs 8 lbs., what will be the weight of another ball $5\frac{1}{2}$ in. in diameter, made of material 20% heavier than the first-named ball?

319. $\frac{2}{3}$ of A's money and $\frac{3}{4}$ of B's money equal $900; and $\frac{3}{4}$ of B's is twice $\frac{2}{3}$ of A's. What sum has each?

320. What is the cost, at $9.50 per cord, of a pile of wood 4 ft. wide, 6 ft. high, 34 ft. long at the bottom, and 24 ft. at the top?

321. After a rainfall of $\frac{5}{8}$ of an inch, how many hhds. of water will a cistern contain which drains the roof of a building 65 ft. by 34 ft.?

322. Divide $\frac{3}{8}$ of $\frac{\frac{4}{5}}{\frac{9}{11}}$ of $17\frac{1}{2}$ by $\frac{4}{13}$ of $4\frac{5}{8}$.

323. Multiply the difference between 4.4 and .00027 by the product of 2.1 and .005.

324. A note of $400 is dated Jan. 1, 1871, on which was indorsed June 4, 1871, $150, and Oct. 9, 1871, $60. What was due April 26, 1872, the rate of interest being 6%?

325. Bought 150 boxes of raisins at 5% less than the first cost and sold them at 5% advance on the first cost, and thereby gained $45. What was the first cost per box?

326. What will it cost, at 18 cents per square yard, to paint the outside of a house 40 ft. long, 26 ft. wide, and 18 ft. high, the height of the roof being 13 ft., and there being no allowance for doors and windows?

327. I have due me $12000; $\frac{1}{4}$ in 5 mos., $\frac{1}{8}$ in 9 mos., and the remainder in 15 mos. What is the present value of the whole debt?

328. If it require 800 yds. of cloth, $1\frac{1}{2}$ yds. wide, to clothe 340 soldiers, how many yds., five-fourths wide, will be necessary to clothe 430 soldiers?

329. Divide $2\frac{7}{8}$ times $\frac{4}{5}$ of $29\frac{1}{3}$ by $4\frac{5}{6}$ times $\frac{3}{10}$ of 8.

330. A square field containing $6\frac{1}{2}$ acres is surrounded by a close board fence 12 ft. high. What did the boards cost at $13 per M.?

331. Divide $\frac{8}{11}$ of $27\frac{1}{2}$ by $\frac{6}{10}$ of $22\frac{3}{4}$, and to the quotient add $\frac{82}{162}$.

332. If I buy 40 qts. of milk by beer measure, and sell it by wine measure, how many qts. do I gain?

333. Sold $4000 in gold at $112\frac{1}{2}$, and invested the proceeds in railroad stock at 62, which I sold soon after at $69\frac{1}{2}$. What was the amount of my sales, and how much did I gain?

334. The circumference of a circle measures 12 ft. 8 in. What will 72° 45′ of it measure?

335. The true discount of a debt of $1215 due in 10 mos. and 20 days is $90. What is the rate?

336. The solid contents of a round log 12 ft. in length are $17\frac{1}{2}$ ft. What is its diameter?

337. The circular basin of a fountain is $22\frac{1}{2}$ ft. in diameter and 2 ft. 8 in. deep. How many hhds. of water will it contain?

338. If I pay $180.36 for the use of $3865 for 8 mos., what would be the principal on which $360.85 is paid for 2 yrs. 4 mos. 15 days?

339. Find the interest in U. S. money, at $7\frac{3}{10}\%$, on £167 8s. 3d. from June 10, 1871, to May 2, 1872.

340. At what % will $1150 in 11 mos. 15 ds. amount to $1249.18\frac{3}{4}$?

341. Find value of $\frac{8\frac{1}{2}-2\frac{3}{8}}{4\frac{3}{4}+\frac{1}{2}}$ of $\frac{2\frac{1}{2}+3\frac{1}{6}}{\frac{1}{10}}+\frac{7\frac{1}{6}-1\frac{1}{3}}{12\frac{7}{18}-11\frac{1}{3}}$.

342. What is the difference in apothecaries' weight between 7 drams avoirdupois weight and 5 drams apothecaries' weight?

343. What must be the depth of a cylindrical cistern 5 ft. 8 in. in diameter, that will contain 25 hhds.?

344. Sold a horse so that $\frac{4}{5}$ of the gain equalled $\frac{2}{15}$ of the cost. What was the gain %?

345. Bought a bill of goods for $800; and marked them so as to gain 40%. After selling $\frac{3}{5}$ of them, $\frac{1}{2}$ of the remainder

was sold at 25% discount from the retail price, and the balance was lost by fire. Did I gain or lose, and what %?

346. If a car-rail weighs 55 lbs. to the yd., what will be the weight of a similar one $\frac{3}{5}$ of the same depth and thickness?

347. What % of the year 1872 is the month of May?

348. A man has 3 bins of wheat, containing 700, 950, and 1000 bushels respectively. He has sold 3 lots of 400 bushels each, 1 lot of 75 bu. 1 pk. 5 qts., and 6 lots each 10 bu. 3 pks. 2 qts. What is the value of what he has left at $1.15 per bushel?

349. What is the difference between $\frac{10\frac{1}{2}}{3\frac{1}{2}}+\frac{19\frac{1}{2}}{3}-\frac{1}{6}$ of $12\frac{1}{2}\times$ $\frac{3}{5}$, and .65.

350. Find the cube root to the third decimal place, of the square of 327 and three-fifths.

351. What will be the face of a bill of exchange on London, at $109\frac{1}{8}$, to pay for 11 tons 13 cwt. 3 qrs. 15 lb. 10 oz. of sugar at £2 12s. 6d. per cwt.; and what will be the currency value of the bill, gold being at $108\frac{1}{8}$?

352. If a baker sells a pound loaf for 9 cents when flour is worth $7 per bbl., and labor is $2 per day; what must he charge for a $2\frac{1}{4}$ lb. loaf, when flour is $4 per 100 lbs., and labor is $1.75 per day?

353. What are the dimensions of a yard, whose length is twice its width, that can be paved with 12000 bricks?

354. How long will it take three two-inch pipes to empty a cistern which is filled by two three-inch pipes in 1 hour and 20 minutes?

355. What is the difference between the square root of the least common multiple of 6, 12, 18, 36, 48, and the square of the greatest common divisor of the same numbers?

356. If 16 yds. of cloth cost $56, when wool is 75 cts. per lb., and labor is worth $2 per day of 10 hours, how many yds. of cloth can be purchased for $150, when wool is .60 per lb., and labor $1.50 per day of 8 hours?

357. A laborer works 18 days, receiving for the first day 1

mill, 2 mills for the second, 4 for the third, and so on. What is the whole amount received?

358. If 10 men mow 25 acres of grass in 2 days of 10 hours each, how many hours per day must 6 men work to mow 28 acres in 4 days?

359. Bought wheat at \$1.10 per bushel. Allowing that the waste has been $1\frac{3}{4}\%$, how must I sell it to gain 8%?

360. My agent in Havana has purchased for me 4500 boxes of sugar, 400 lbs. each, at $5\frac{1}{4}$ cts. per lb., and 2150 hhds. molasses at $39\frac{1}{2}$ cts. per gal. When exchange is at $3\frac{3}{4}\%$ premium, gold at $111\frac{1}{8}$, and commission $3\frac{1}{4}\%$, what will be the currency value of a draft on Havana to pay all expenses?

361. In a square lot containing $\frac{3}{4}$ of an acre, how far is the centre from each corner and from the centre of each side?

362. What is the outside length of one side of a cubical cistern 1 brick in thickness, that will contain 33 hhds.?

363. When gold is quoted at $112\frac{3}{8}$, what amount in currency will be necessary, May 2, to pay a demand of \$1500 due in gold August 17?

364. How many cubic yards of earth will be necessary to cover $\frac{3}{16}$ of an acre 8 in. deep?

365. How many acres of land will be required for an orchard of 1600 trees set in rows 2 rods apart each way, there being also a space of 20 ft. all round outside the trees?

366. A commission merchant has sold for me 1500 bales of cotton cloth, each bale containing 42 pieces, of $32\frac{3}{4}$ yds., at $9\frac{1}{4}$ cts. per yd., and invested the proceeds in cotton at $23\frac{3}{8}$ cts. per lb. If he charges 2% for selling, and $1\frac{1}{4}\%$ for purchasing, what number of pounds of cotton does he send me?

367. Bought 5 shares of railroad stock at $108\frac{3}{4}$, and after keeping it 11 months, received a dividend of \$7 per share, and then sold the stock at $109\frac{1}{8}$. What $\%$ did I receive on my investment?

368. In what time will money double itself at $1\frac{3}{4}\%$ per month simple interest?

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